SPECIAL REPORT

August 6, 1962

RAILWAY AGE WEEKLY

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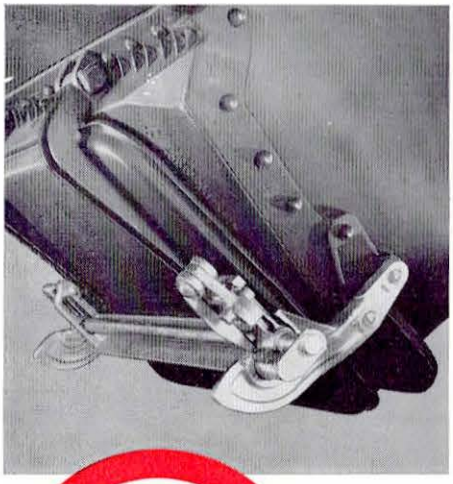

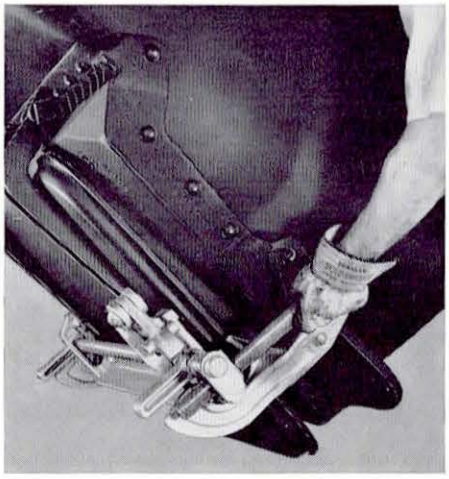

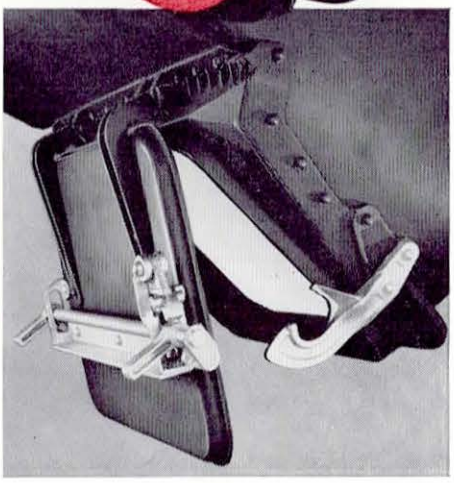

Door in final locking stage. Cam on each side goes to dead center for positive locking action. Operating head near outside of car. *Inset:* Locking pawl serves as safeguard . . . door *stays* locked.

Initial opening is safety step requiring approximate 90° turn. Door opens *part* way. This step suitable for discharging fine materials or where conveyor system is inadequate for full discharge.

Further rotation of bar disengages hooks so door swings freely on hinges. Swinging door after car is empty returns it to safety position and use of bar through cam brings door to final locked location.

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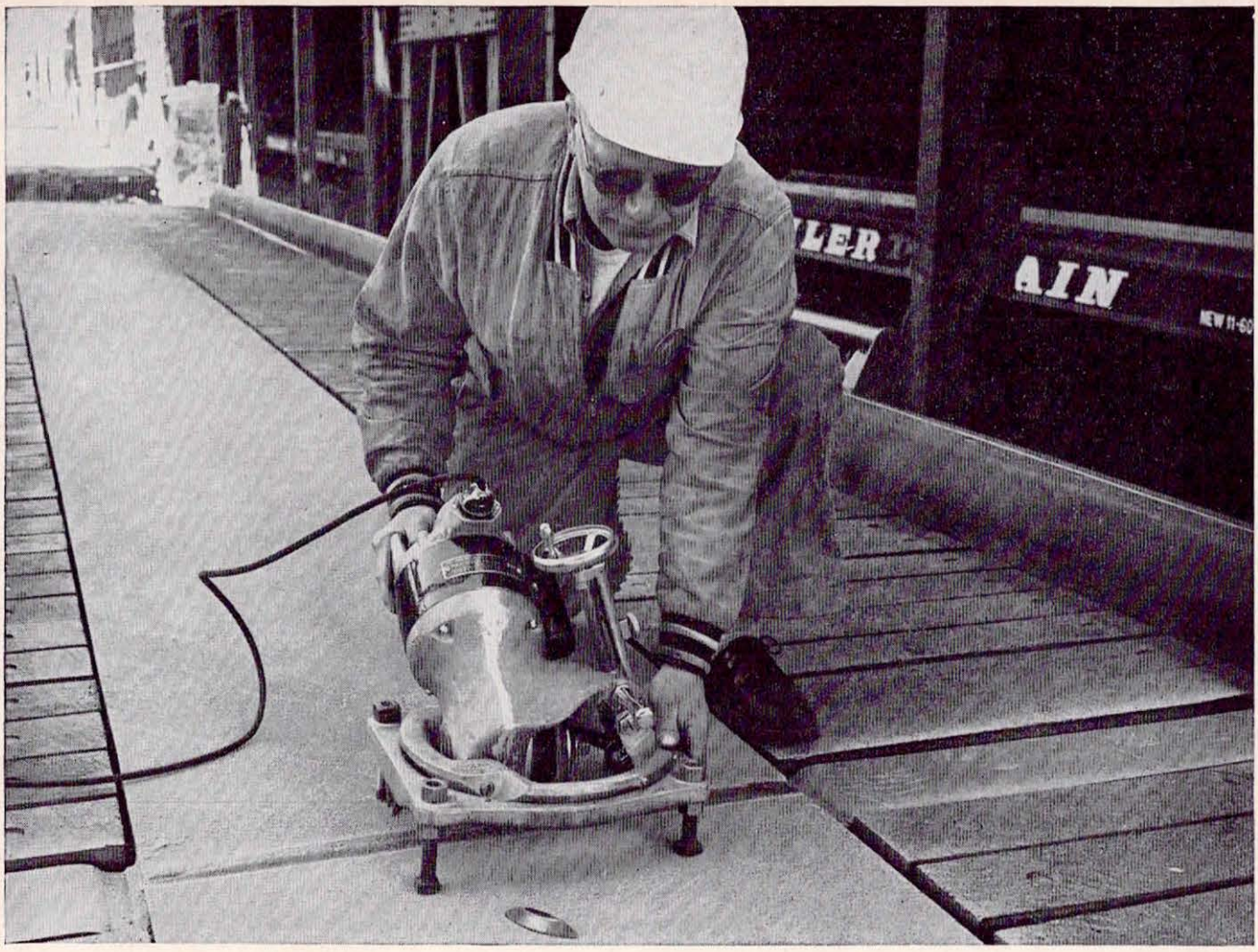
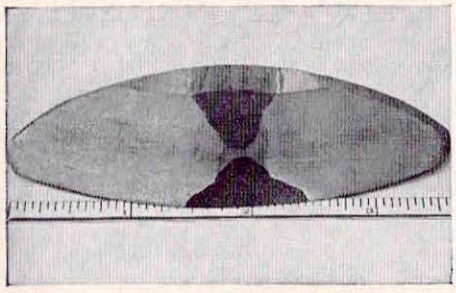


Quality control at work on a Bethlehem 85-ft flat car



This 4-inch weld specimen gives inspector good look at weld quality. If it shows defects, a new weld is carefully supervised, and immediate steps are taken to correct the problem at the source. This is but one way in which Bethlehem upholds high level of quality on all freight cars.

What's this? Deliberately cutting up the center-sill cover-plate on a brand new piggyback flat car?

That's exactly what he's up to. He's holding a weld-prober, which cut the little boat-shaped specimen from the buttwelded joint in foreground. The specimen gives this quality control engineer a good look at the workmanship in the weld. If he spots any defects, such as slag inclusions, cracks, porosity, lack of fusion or penetration, he'll know what to do about them—*and he'll do it.*

The soundness of every weld and the quality of each part are essential to the service life of a whole freight car. That's why Bethlehem's quality control engineers are in the shops at all times, checking on every detail of construction, helping to overcome difficulties, often suggesting improvements.

It's paying off, too. We're developing such a high standard of excellence in car construction that one of these days we believe you will find it unnecessary to inspect our product. You will pocket the savings. We'd like to demonstrate our ideas of quality on your next order.

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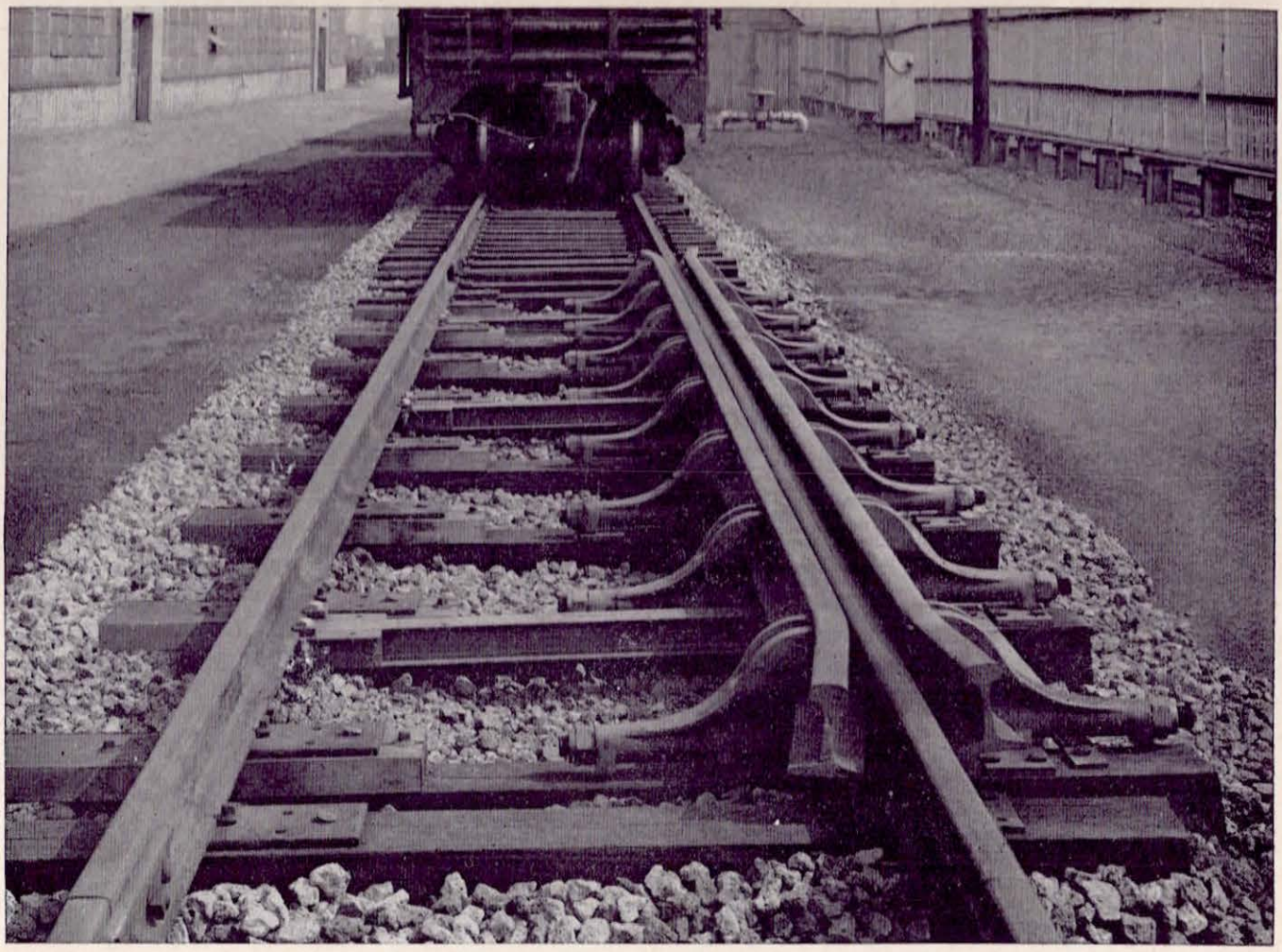

New self-operating, weight-proportional retarder provides consistent and dependable retardation regardless of car weight

The UNION Model 40 Inert Retarder is completely automatic but it requires no external source of power. The weight of the car activates the retarder and determines the braking force. This weight-proportional braking removes the same velocity head from all cars and assures consistent retardation regardless of weight. Moreover, width of car wheels has no effect on the braking force.

Cars can be safely pulled through this retarder during switching operations or for other necessary car movements. Weather doesn't affect it. In fact this completely mechanical unit is so simply and ruggedly built that it is almost maintenance-free. All that is required is an occasional check of the braking rail gap. Top of tie mounting arrangement provides for easy inspection, adjustment, and track maintenance.

The Model 40 retarder eliminates the trouble and expense of placing and removing skates in classification yards . . . speeds yard operations . . . pays for itself quickly out of savings. On the hump approach of automatic classification yards, it also serves to clean and condition car wheels. In other locations it can simplify and speed car spotting. Ask your nearest Union Switch & Signal office or representative to give you full details about the Model 40 Inert Retarder.

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RAILWAY AGE

WEEK AT A GLANCE

August 6, 1962 • Vol. 153, No. 6

SPECIAL REPORT: INDUSTRIAL DEVELOPMENT

The railroad I&AD story p.24
Railroad I&AD men have many jobs p.27
Industrial development box score p.28
What executives think of I&AD p.30
Who's who in industrial development p.42
The Action Page—Tops in area promotion p.66

'Job-freeze' strike averted on C&NW

In a case closely watched by the entire industry, the ORT accepted President Kennedy's request for a 45-day postponement of a scheduled walkout pending further talks .....**p. 9**

New RPI study blueprints RR future

The Railway Progress Institute has published an optimistic study of rail trends — traffic prospects, financial needs—for the next eight years. **p.17**

Railroads step up research pace

Interest in rail research is growing and a number of roads are stepping up test programs. Recent RSMA seminars have outlined the changing story. **p.51**

How MP extends motor-mount life

Bonded-rubber nose support mountings for traction motors have overcome wear and breakage problems. Missouri Pacific is using the mounts in road and switcher locomotives. **p.52**

Departments

Dividends Declared 56
Freight Carloadings 59
New Equipment 59
New Products Report 57
People in the News 54
Railroading After Hours 15
Railway Market 59
Supply Trade 55
The Action Page 66
Watching Washington 10
You Ought to Know 64

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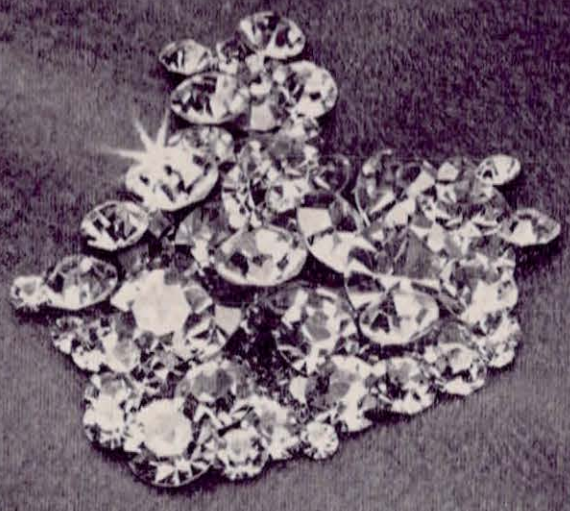

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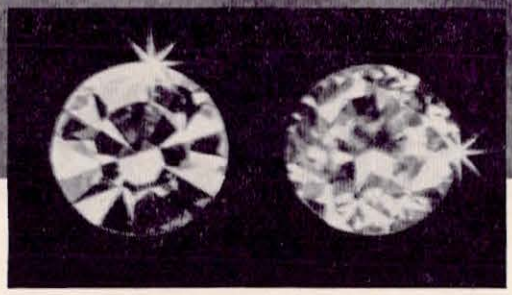

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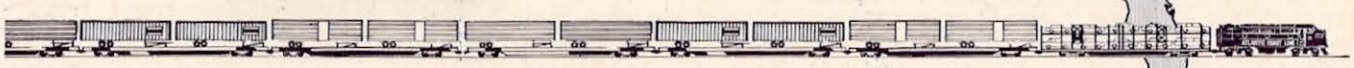

RAILWAY AGE

WEEK AT A GLANCE

PRR fixes blame in fatal wreck

A maintenance gang's failure to apply sufficient rail anchors to a section of track under rehabilitation is blamed for the derailment that killed 19 and injured 100 ..... **p.60**

N&W offers to buy Atlantic & Danville

A cash offer of $1.5 million for the bankrupt A&D will be made by N&W at a public auction to be set by a federal court **p.61**

Shippers and coalmen back rate freedom

Legislation to free bulk commodities and agricultural and fishery products from minimum rate regulation has picked up new support. **p.62**

Short and Significant

200-mph, automated trains . . .

for short hauls along the congested eastern seaboard have been proposed by New York's Regional Plan Association. Object: to clear the air for long-haul planes.

Bad-order cars . . .

in the Class I fleet totaled 129,215 on July 1, according to the AAR's Car Service Division. The bad-order figure a year ago was 151,901.

Coming Next Week: Report from Canada

The CPR and CN won their work-rules fight with diesel firemen four years ago. What has happened since then carries a lesson for the U.S.

Current Statistics

Operating revenues	
3 mos., 1962	$2,295,749,272
3 mos., 1961	2,128,376,735
Operating expenses	
3 mos., 1962	1,830,377,994
3 mos., 1961	1,780,358,037
Taxes	
3 mos., 1962	257,685,487
3 mos., 1961	228,925,289
Net railway operating income	
3 mos., 1962	112,621,164
3 mos., 1961	23,354,922
Net income estimated	
3 mos., 1962	66,000,000
3 mos., 1961	D. 12,000,000
Carloadings revenue freight	
30 wks., 1962	16,415,668
30 wks., 1961	15,766,608
Freight cars on order	
July 1, 1962	13,274
July 1, 1961	11,821
Freight cars delivered	
6 mos., 1962	19,984
6 mos., 1961	18,782
Serviceable cars	
July 1, 1962	1,452,888
July 1, 1961	1,485,802
Cars awaiting repairs	
July 1, 1962	129,215
July 1, 1961	151,901

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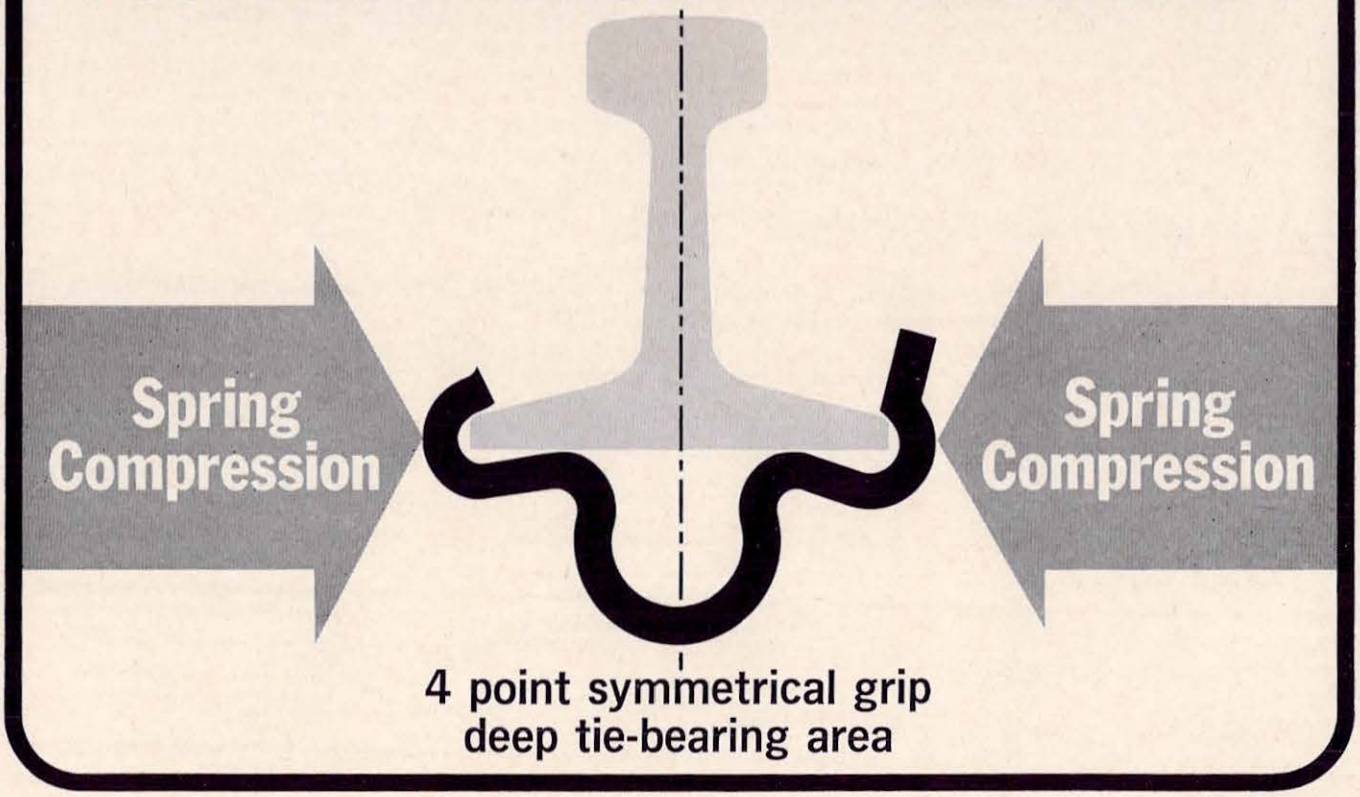

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Work Rules: Next Round

Federal Judge Joseph Sam Perry has notified carrier and brotherhood attorneys that he will sit Monday, Aug. 6, in the U.S. District Court of the Northern District of Illinois to accept any motions arising out of the complaint filed by five operating brotherhoods on July 26. The ops' suit seeks to sidetrack carrier proposals to implement work-rule modernization recommendations of the Presidential Railroad Commission (RA, July 30, p. 9).

Brotherhood attorneys last week served a motion in the District Court seeking a preliminary injunction to restrain the carriers from putting the work-rule changes into effect until a hearing is granted to determine their right to a permanent injunction.

Mediation efforts in the work-rules dispute broke off in mid-July and a proffer of arbitration was turned down by the brotherhoods, but the carriers said they were agreeable to submitting the dispute to arbitration "in its present posture."

The organizations' attempt to halt carrier rules-change proposals through court action posed the threat of a work stoppage if the courts fail to grant the relief requested. In their complaint, the ops argue that the carrier proposal to implement "drastic revisions in the rates of pay, rules and working conditions" on Aug. 16 violates four sections of the Railway Labor Act. They also contend that the carrier proposal restricts the actions of the organizations under the Act and ask the court to rule the carrier proposals invalid and in violation of the Act.

A principal (and controversial) PRC recommendation which the carriers propose to put into effect calls for the gradual elimination of firemen from road-freight and yard diesels.

'Job-Freeze' Strike Averted on C&NW

► **The Story at a Glance: A threatened strike of Chicago & North Western Telegraphers was averted late last week as ORT President George E. Leighty agreed to postpone the walkout temporarily at the request of President Kennedy. Earlier, Secretary of Labor Arthur J. Goldberg had summoned carrier and union representatives to Washington in an effort to reopen stalemated negotiations in the ORT-C&NW "job-freeze" dispute. The union has been free to strike since July 15 following investigation of the dispute by a Presidential Emergency Board, which recommended withdrawal of ORT's job-stabilization demands and negotiation of a comprehensive program of employee protection.**

Shippers had already begun to divert some traffic from the strike-threatened Chicago & North Western when a last-minute request by President Kennedy averted a scheduled Aug. 2 walkout of Telegraphers. The ORT strike call came after negotiations over long-standing job-stabilization demands had broken down. The strike of some 1,000 C&NW Telegraphers would have stranded 40,000 daily commuters served by North Western and idled more than 15,000 C&NW employees in nine Midwestern states.

The underlying issue, of prime concern throughout the industry, is an ORT demand that North Western contends would give the union full power to impose a complete "job freeze" on all positions within its jurisdiction. The organization's Section 6 notice, served on the carrier more than four year ago, is that "no position in existence on Dec. 3, 1957, will be abolished or discontinued except by agreement between the carrier and the organization." The dispute has weathered all provisions of the Railway Labor Act aimed at reaching a peaceful settlement and the union has been free to strike since July 15, the end of the "cooling-off period" following investigation of the dispute by a Presidential fact-finding board.

North Western accepted but ORT turned down the Emergency Board recommendation that the "job-freeze" demand be withdrawn and that "the parties should negotiate a comprehensive program of employee protection." In its report, the Emergency Board concluded that "this kind of approach to job security (joint consent) would inevitably mean the retention of some jobs which by any reasonable standards serve no real purpose other than that of providing an income for the incumbent." The board, appointed by President Kennedy on April 23, also recommended that the sounder approach is to cushion the impact upon individuals and families to prevent excessive personal hardships and assist employees in making successful adjustments.

Protective provisions envisioned by the board would include ample notice of intended position elimination, a guaranteed 40-hour week for extra-board telegraphers, measures to maintain earnings and fringe benefits along the lines of the Washington Job Protection Agreement, special provisions for unemployment compensation and termination pay, payment of moving expenses and protection against real-estate losses, and a program of training and retraining to broaden the qualifications of present employees and facilitate the rehiring of previously affected employees.

The Telegraphers' acceptance of President Kennedy's request for a 45-day postponement of the strike was conditioned on the assignment of Labor Secretary Goldberg to supervise negotiations and the proviso that if no progress is made toward settlement the union would be free to reinstate its strike call. An ORT spokesman in Chicago said that the union strike team would remain on the property during the coming bargaining sessions.

North Western originally took the position that the ORT's "job-freeze" demand was not a bargainable issue under the provisions of the Railway Labor Act. ORT's first strike threat in the dispute in August 1958 was thwarted when the carrier obtained a

WATCHING WASHINGTON WITH WALTER TAFT

(Mr. Taft is on vacation. During his absence, this column is being written by other members of the staff.)

• **ICC APPROVAL** was granted last week to a request by the Boston & Maine to withdraw its application for a government-backed loan under the provisions of the 1958 Transportation Act. With B&M's withdrawal, there now remains no further loan-guaranty applications pending before the Commission.

• **PACIFIC MOTOR TRUCKING CO.,** a subsidiary of the Southern Pacific, has been granted unrestricted rights to serve a new General Motors automobile plant in California as a contract carrier by motor vehicle of new automobiles and trucks in driveaway and truckaway service to specified points in Nevada. PMT's application was supported by GM; it was opposed by trucking associations and an individual trucker.

ICC OPERATING RIGHTS REVIEW BOARD, which approved the application, said that it did so on the basis of "special circumstances," namely, that a service similar to that proposed is already being offered by PMT to another GM plant in California, which will be replaced by the new plant. "A denial of the application would preclude the shipper from continuing to use a service which has proved to be particularly fitted for its requirements," the decision said.

• **FREIGHT FORWARDERS' NET INCOME** for the first quarter of 1962 was over $1 million higher than for the first quarter of 1961. Statistics released by ICC's Bureau of Transport Economics and Statistics show that the 62 forwarders having annual gross revenues of $100,000 or more had net income of $1,673,187 in the first quarter this year, compared with $603,952 in the similar period last year. Operating revenues for the 1962 first quarter totaled $36,577,173, compared with the 1961 quarter's $33,-349,376. Tons of freight received from shippers in the period increased from 943,587 in the 1961 quarter to 1,032,300 in the 1962 quarter.

• **TACTICS TRUCKERS WILL BE USING** in their efforts to defeat S. 3243 and H.R. 11583, which embody the Kennedy Administration's recommendations for eliminating ICC regulation of minimum rates on bulk commodities and agricultural and fishery products, are spelled out in a circular letter dated July 9 from John V. Lawrence, managing director, American Trucking Associations (RA, July 30, p. 68).

MARKED 'MOST URGENT' and directed to "all trucking company presidents," the letter describes "the prospect of cut-throat railroad rates" as "the No. 1 threat to a trucking business." The railroads are going all out for the bill, the letter states, by "flooding Senators and Congressmen with letters and telegrams. They are actively seeking support from your local chambers of commerce—and in some cases getting it. They are seeking the support of shippers, and in too many cases getting it. . . . Don't let them get away with it. It is up to you—all of you—to take them on and offset their efforts with similar and greater efforts of your own. . . . Make up your mind that this is your fight, that it is a fight to the finish, and that you are going to give whatever time and effort it takes to win it." The letter ends with a briefing of arguments in favor of the legislation and a long list of arguments to counter them.

• **SENATOR WINSTON L. PROUTY** (R.-Vt.) is the new Republican member of the Senate Commerce Committee, replacing Senator Clifford P. Case (R.-N.J.), who succeeds to a vacancy on the Armed Services Committee.

temporary restraining order against the walkout in a U.S. District Court. After a full hearing the court ruled the ORT demands bargainable and denied North Western any further injunctive relief. A carrier appeal brought reversal of the lower court's ruling in the U.S. Court of Appeals. The Telegraphers then carried the dispute to the Supreme Court and on April 18, 1960, the high court handed down its landmark decision which ruled the union job-stabilization demands a bargainable issue and that the case was one "involving or growing out of a labor dispute." The Supreme Court also ruled that the injunction ordered by the Court of Appeals was forbidden under the Norris-LaGuardia Act. The high court subsequently denied North Western's petition for a rehearing. With the court's decision clearing the "job-freeze" issue as bargainable came a dissenting opinion which warned that an ORT win would "destroy the public regulation of abandonments, provided and contemplated by Congress in the public interest, and render them subject to the union's will alone."

Similar ORT "job-freeze" demands are pending on 33 other railroads representing more than 60% of the nation's railroad employment. On North Western, 14 other unions have filed similar job-stabilization demands and all 14 have conducted strike votes.

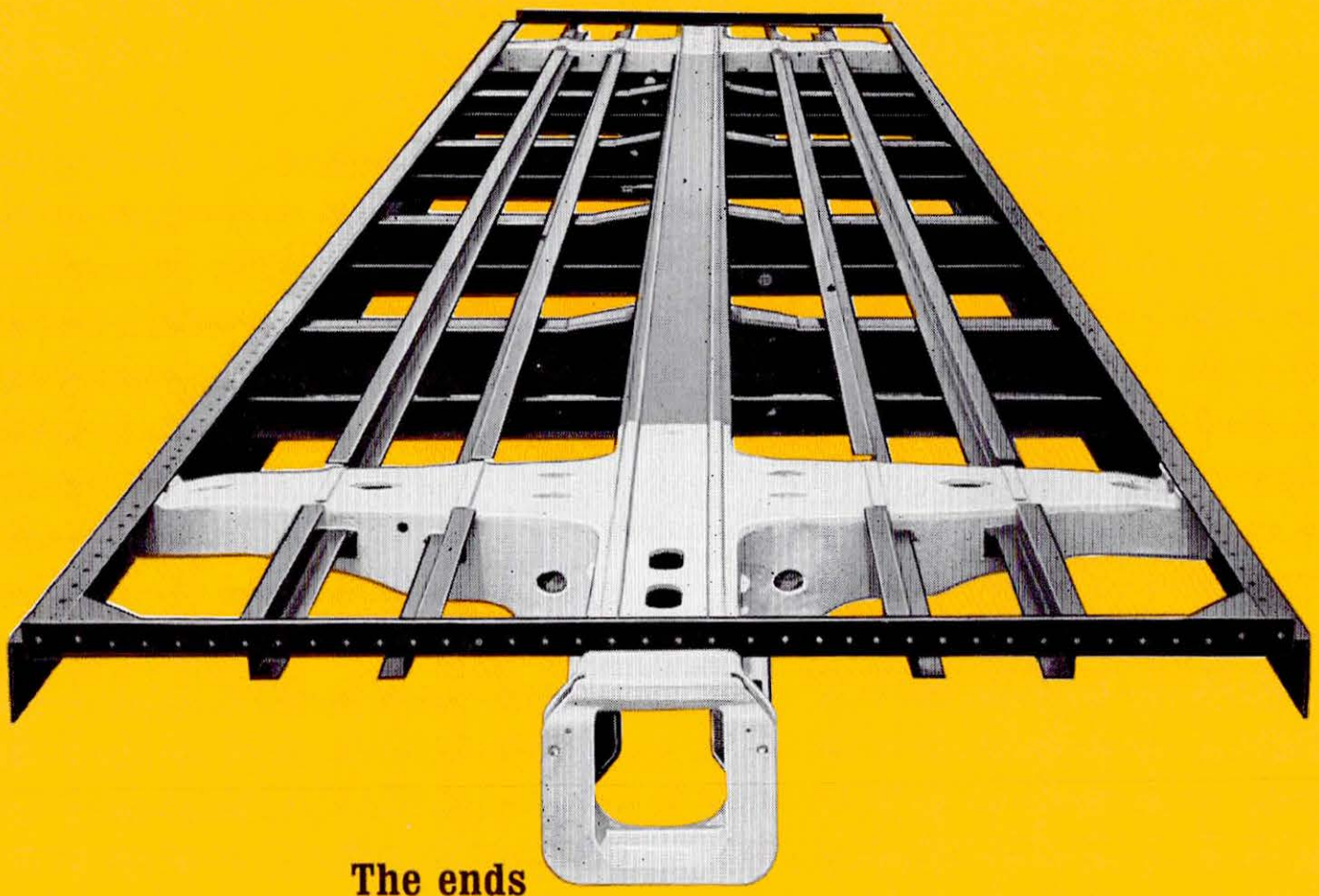
Seaboard to Begin Piggybacking Mail

The Seaboard announced plans to begin a mail-by-piggyback operation between Jacksonville, Fla., and Tampa starting this week.

The new service is designed to provide faster movement of mail between Jacksonville and the cities of St. Petersburg, Sarasota, Bradenton and Venice. It will advance arrival time at destination points, and also permit later closing hours for outbound mail.

The road is placing new equipment in service to begin the operation. The equipment, costing approximately $75,-000, includes two 85-ft flat cars built by Greenville Steel Car; four 40-ft Mark III aluminum vans and two Mark III bogies built by Strick Trailer; and a "Commando" tractor transfer unit built by Young Spring & Wire Corp.

Under the new plan, mail will be loaded at Jacksonville directly into the vans. The vans will move to Tampa by rail. Here the loaded vans will be transferred for over-the-road movement to destination cities.



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Yes, we stand on the record, because the record shows that General Steel cast steel underframe ends give you the most performance with the least maintenance, at the least overall cost.

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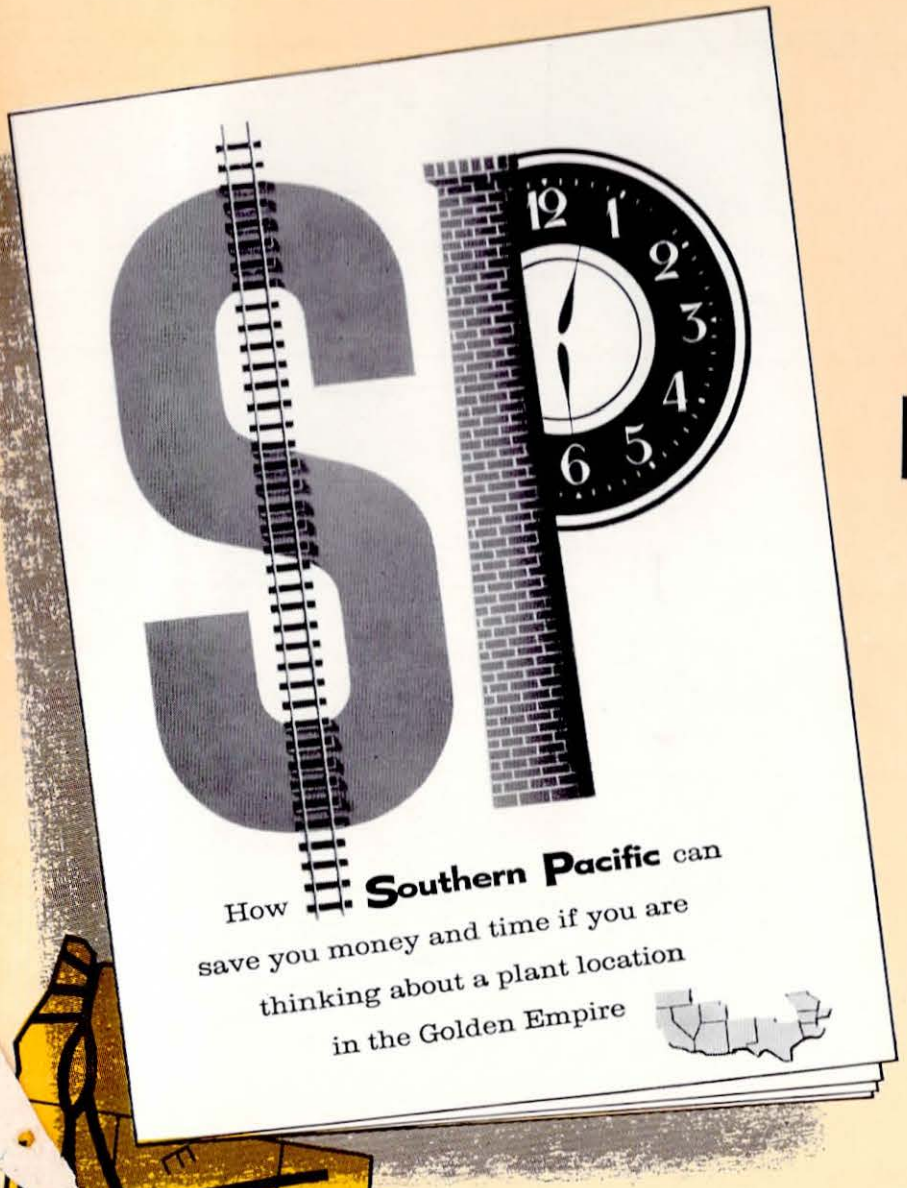

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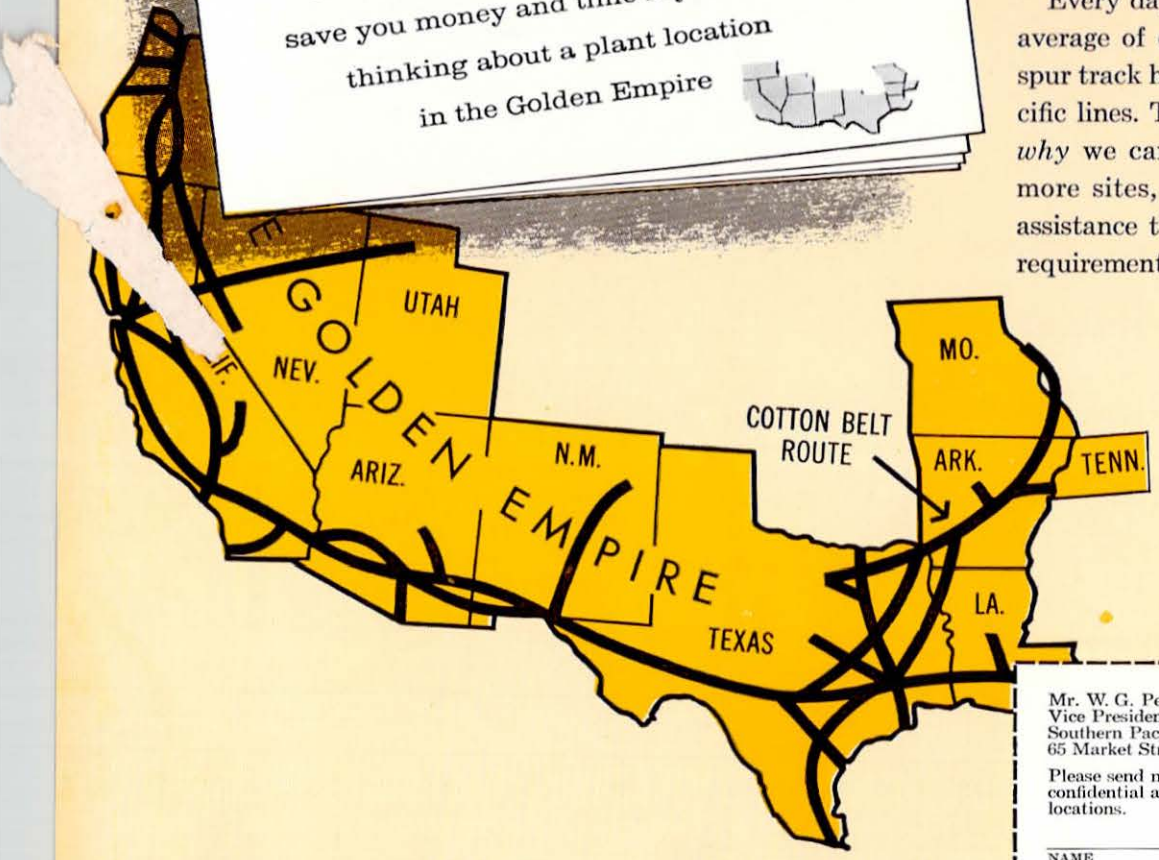

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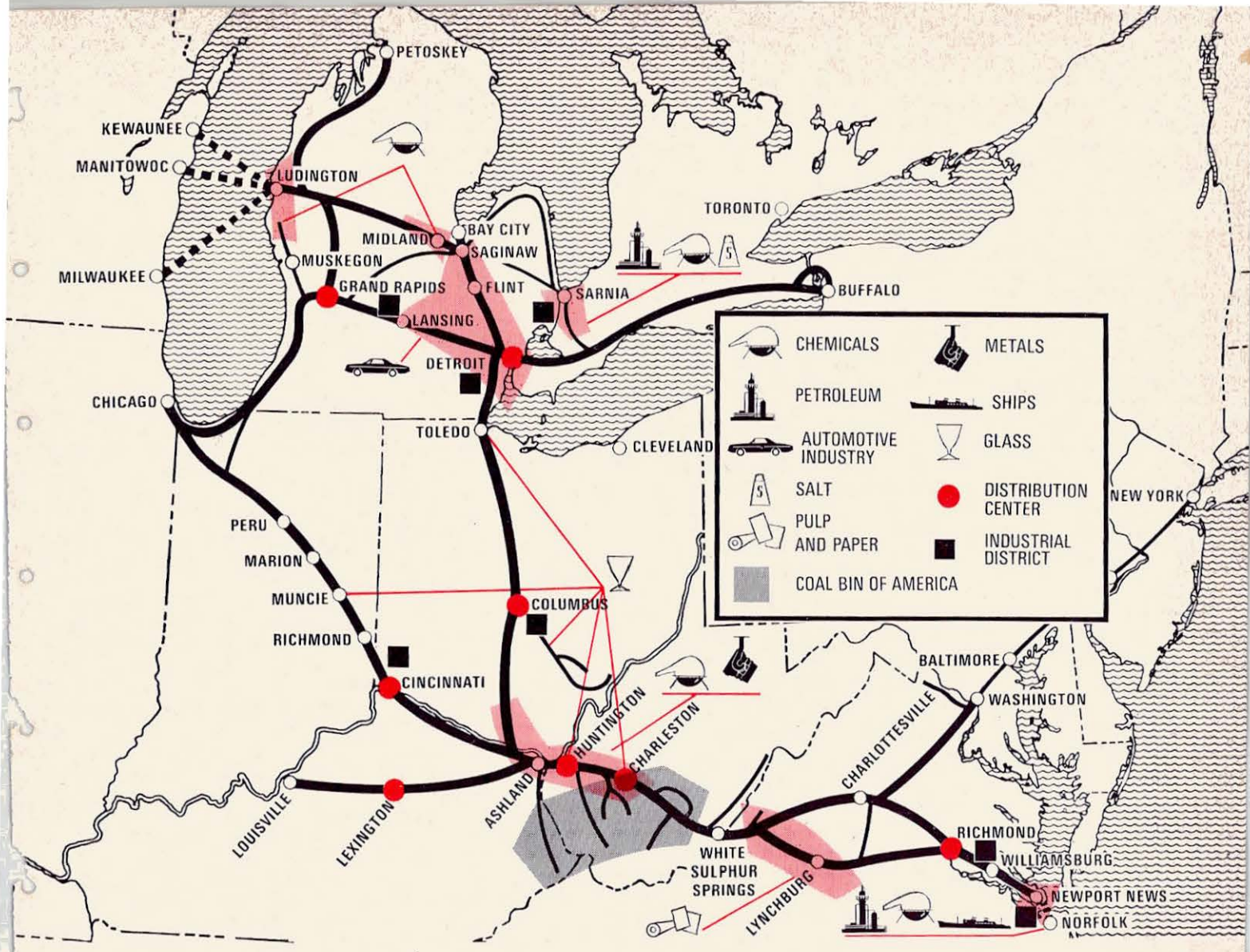

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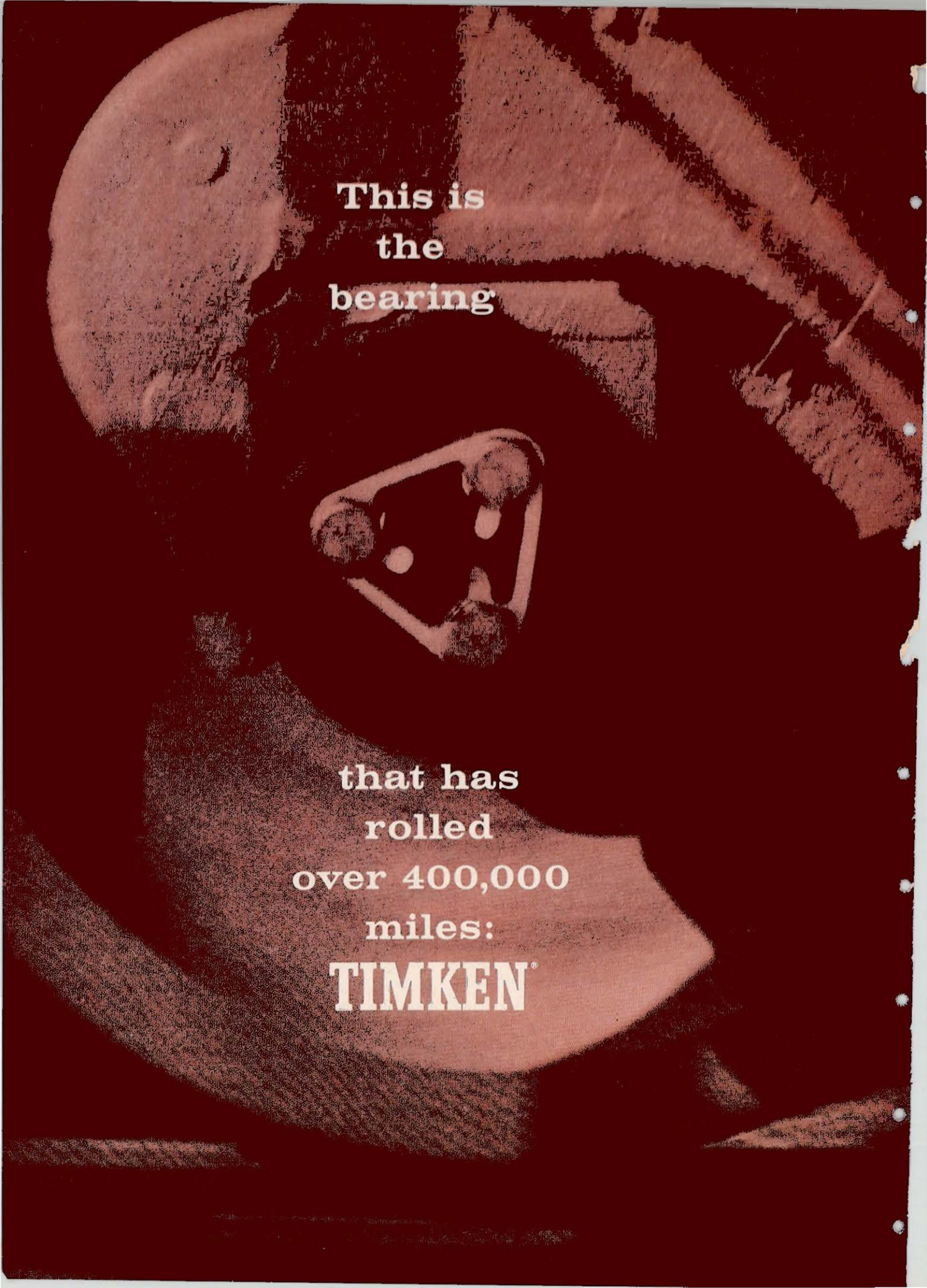
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RAILROADING AFTER HOURS WITH JIM LYNE

CAR-BODY LIFE 200 LOADS?—My well-posted informant on freight car maintenance costs (see this corner in the July 2 issue) still believes, despite some questions I've relayed to him, that heavy repairs are primarily a function of the number of loadings a car gets—rather than of mileage run or time elapsed. For instance:

"When I look at a brand-new open-top hopper or gondola, I say to myself: There's a piece of equipment that can be loaded 200 times before it has to have a new body. Give or take 10% and you'll find this a reasonable figure. Body destruction results from corrosion and physical abuse, both functions of the times the car is loaded and unloaded.

"Car shakers, dumpers, open fires to thaw frozen lading, clamshell buckets, magnets, overhead loading chutes (seemingly designed to see whether or not the bottom of the car can be knocked out) make it necessary to spend 40-50% of the cost of the car to replace the body, after about 200 loads."

Transportation Consultant Bill Saunders believes many more factors enter into car repair costs than number of loads, e.g., time, frequency and type of handling by switch engines, mileage, and loading and unloading. The fact that expenses may closely correlate with number of loads doesn't mean (he believes) that the loads are necessarily the direct cause of the repair expenses. Mr. Saunders believes open-top mileage could be increased 3 or 4 times with repair expense only doubled.

SOCIALISM, U.S. BRAND—"California," Governor Edmund G. Brown said recently, "is still the leading state in construction of modern toll-free multilane freeways and expressways." Is the Governor boasting or apologizing?

The toll-free superhighway is an undiluted socialist institution and the U.S. has the biggest example of it on the face of the earth, Russia included. And we are adding to it at the rate of billions of dollars a year.

TAXPAYERS—THOSE PIGEONS—Archie Page, special representative of the C.&O. at Richmond, has sent me a clipping from a local paper, quoting a state legislator to the effect that in Virginia "the trucking lobby has reached such proportions that it borders on a state scandal." The legislator asserted that out-of-state trucks run up more mileage on the state's roads than Virginia trucks do, and pay no local fees, thereby enjoying a large subsidy from Virginia taxpayers.

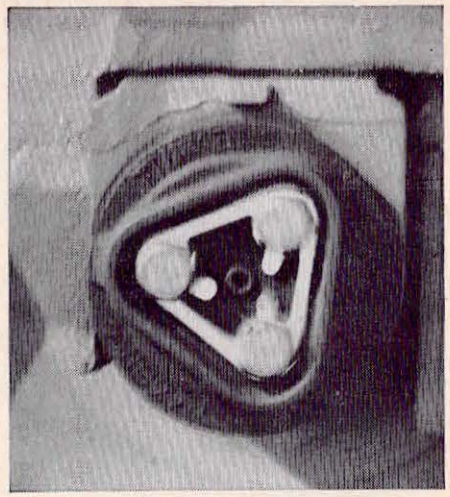
I've been hearing evidence of this kind for 30 years, with hardly any signs of firm corrective action—usually quite the contrary. It is the taxpayers (and public employees, such as teachers and policemen), not the railroads, who have the most to gain from compensatory fees for commercial use of the highways. If fees per truck were increased by $1,200 a year, it would mean a lot to state treasuries and state employees, but would add only about one mill per ton-mile to the expense of hauling freight by truck—certainly not enough to be of any great competitive help to the railroads. All the railroads have gained from fighting the taxpayers' battle on this issue, so far, has been a lot of grief (e.g., the $250,000,000 lawsuit that the Eastern roads had to defend, at great expense to themselves).

It may be that legislation dominated by pressure groups is the way to make our country economically strong against Communist competition. But I doubt it.

HEADACHES IN BRITAIN—A prominent British railwayman, K. W. C. Grand, has resigned his membership on the British Transport Commission, the directorate that operates the British railways. As I get it from reading the Railway Gazette (London), Mr. Grand has not been happy at the direction the British railways have taken since their nationalization—especially the recent policy of paring down services to meet declining demand.

Prior to nationalization, Mr. Grand occupied just about all the top jobs on the old Great Western Railway, including that of general agent for that company in North America in the late 'Twenties. A British railway union publication commented, relative to Mr. Grand's retirement, that "we would rather have a man fiercely loyal to one railway than to have men in charge who are not loyal to any."

We Anglo-Saxons, with our heritage of private initiative, are having a heck of a time accommodating ourselves to living under the socialistic philosophy imported from the European continent. It's a little like expecting a fish to learn to walk while unlearning how to swim.



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NEW RPI STUDY BLUEPRINTS

THE RR FUTURE

► **The Story at a Glance: Optimism about the future of the railroads CAN be justified. A new study, made by R. L. Banks & Associates for the Railway Progress Institute, does just that—in painstaking, statistical fashion and in the context of the competitive and political climates in which transportation must operate.**

The Banks study, second such long-range survey to be commissioned by RPI, projects freight traffic levels for 1965 and 1970 in three ranges, with mid- and high-range estimates significantly above 1960 ton-mile totals.

Using the mid-range figures as a basis —618 billion ton-miles in 1965, 651 billion in 1970—the researchers then go on to indicate the improvements required to put the industry in shape to handle the traffic. By Banks' figures, this calls for expenditures of $17,070,000,000 during the decade—and, also by the consultants' reckoning, this is not a sum beyond the reach of the industry.

By logical progression, R. L. Banks & Associates' study, "The Railroad Future," builds a strong case for the bullish attitude.

Economic indicators, over a broad area, point to an increasing demand for transportation. More plus factors than minus factors—internal and external—seem to be at work on the railroads. Barring railroad failure to adapt to changing conditions; "unusually aggressive and successful action" by competitive modes; or an unfavorable economic or political climate, rail traffic should (with the exception of passenger traffic) show consistent and substantial increase during the 1960s.

The Banks study makes three projections of freight traffic—a low range "zone of danger" which is a simple projection of ton-mile trends; a middle range derived from a mid-range forecast of total intercity ton-miles and assuming the historic trend of distribution among various modes; and a high range "zone of opportunity" in which railroads will participate in national patterns of economic growth. This top-most level is based on the assumption that the rail percentage share of total ton-miles can be held to the 1960 level in 1965 and restored to the 1955 level in 1980. It also includes a continuation of the present estimated piggyback growth rate.

The report estimates traffic for 1965 at 669 billion ton-miles (high range), 618 billion (middle range) and 560 billion (low range). For 1970, the figures are 864 billion (high), 651 billion (middle) and 525 billion (low). The actual 1960 total: 579.1 billion.

Passenger traffic estimates, however, trend steadily downward, except for increases predicted for commuter service. Progress in building the Interstate highway system and airline efforts to get maximum utilization of their jets are both expected to result in further cuts in rail passenger patronage. Railroads accounted for 21.6 billion intercity passenger miles (including commutation) in 1960. The Banks forecasts: For 1965, 19 billion (high range), 17.2 billion (middle range) and 14 billion (low range). For 1970, 17 billion (high), 14.4 billion (middle) and 11 billion (low).

A big factor in the survey's optimistic slant on freight traffic is an assumed readiness to cooperate on the part of all segments of the railroad industry—management, labor, investors and suppliers. Banks is also careful to note that success hinges largely on the carriers taking advantage of every self-help opportunity, while not letting up in their drive for a better political, legislative and regulatory climate.

Improvement costs

With the projected traffic levels and the atmosphere-of-progress comments entered in the record, the report turns to a study of railroad needs—using the middle-range traffic estimates as a basis for figuring—and comes up with the suggested $17,070,000,000 improvement program during the decade.

Of this total, Banks proposes that $7,490,000,000 be spent on right-of-way and structures and $9,580,000,000 on equipment.

Overall, the report notes, "the objectives in planning additions to plant as well as normal replacement programs should be, not only the provision of capacity adequate to meet the calls for service, but also the provision of this capacity in ways which will achieve lower costs and service improvements. In fact, the forecast traffic can only be attained if there is improvement in these respects.

"Situations will arise which require a choice between emphasis on cost reduction and improvement of the railroads' competitive thrust through upgrading of service standards. The goal of short-term cost minimization, while basic, must not be allowed to overshadow its alternative because it is only through traffic generated by improved service that overall unit costs will be reduced in the long run."

Any determination of the need for new investment, the study points out, "must allow for increases in efficiency of utilization of plant and labor which will occur. Such increases may come about through the development and application of new types of equipment, or through continuing automation. Thus the characteristics of the 'standard' box car may change, as may the concept of what is a tolerable ruling grade."

Department by department, item by item, the report probes past and present maintenance and improvement trends—and then outlines the needs of the future.

The first statement covering the first need—improved way and structure standards—pretty much sets the pace for what follows. A good many railroads, the report declares, "must upgrade their recent maintenance expenditure if they are to cope adequately with increased traffic."

Banks uses 1952—"a year of apparently normal maintenance"—as his base year. In detail, the researchers trace declines in tie and rail replacement over the past 10 years—and, by their figures, the railroads face an expenditure of $203,000,000 for tie replacement and $122,000,000 (net after salvage) for rail replacement to return to 1952 standards over the next three years. Overall, the study sees the need for expenditures totaling $2,490,000,000 between now and 1965 for upgrading fixed facilities "to a condition of readiness for anticipated traffic."

In addition, the survey suggests a $5,000,000,000 capital expenditures program, concentrated in the 1965-70 period—"when most of the 'shaking down' and rearrangements of properties incident to mergers will have occurred or will have been crystallized in definite plans. The way then will be much clearer than it possibly could be now to make plans for other changes in fixed facilities."

Key to the study's projection of freight car requirements in the decade ahead is an indicated improvement in net ton-miles per car-day. Banks reasons that the improvement will run 1.5 per cent per year through 1965 and 2 per cent per year 1966-70, or 17.5 per cent during the decade.

Applying these figures to 1960 car productivity figures (292,000 revenue ton-miles per car), working in the pro-

'...The program adds up to $17,070,000,000...'

jected traffic levels for 1965 and 1970 and estimating a reduction in the bad-order ratio from 8 to 3 per cent, Banks comes up with estimates of car fleet requirements: 1,877,000 cars in 1965, 1,810,000 in 1970 (compared to 1,985,000 cars in existence at the end if 1960).

The study figures first on a $250,000,000 added maintenance program, split about evenly before and after 1965. And, the report notes, "considering the need for overcoming large aggregate inefficiencies of older cars still remaining in 1960, and also the strong likelihood, particularly (with) a revision of depreciation allowances in the tax laws, that the railroads will buy cars which embody desirable technological developments, it seems conservative to conclude that acquisition of new cars will continue until 1965 at least at the 1952-60 rate of 59,600 per year. Retirements will average 81,200 per year . . . as compared with 69,175 per year from 1952 to 1960.

"If the car fleet is brought to about 1,877,000 cars in 1965 and about 1,810,000 cars will be needed to meet the requirements of 1970, car orders will not cease after 1965. There will be a continuing need for replacements. The rate . . . will be slowed down as the result of improvement in the quality of the fleet through 1965, but continuing technological developments will make it profitable, particularly with changes in the tax laws, to continue replacements at more than a minimum rate."

Ton-miles, the study points out, are expected to be up 5.3 per cent in 1970 over 1965. It's Banks' conclusion that car replacement over the last five years of the decade will average 35,000 per year.

The cost of the overall program: $3,600,000,000 up through 1965; $2,100,000,000 from 1966 to 1970.

Banks' view of the passenger car market covers replacements rather than additions to the fleet (except perhaps in commutation). Through the forecast period, the report estimates the railroads will acquire about 333 passenger-train cars per year, at an average annual cost of approximately $43,800,000.

Analysis of motive power requirements also leads the surveyors to what is basically a replacement situation. Banks figures, on the basis of improved locomotive productivity applied to projected traffic levels, that the railroads will need 28,000 locomotive units in 1965 and 27,000 in 1970. Over the 1961-70 decade, the study projects a need for 18,400 new or rebuilt units—6,700 in the first half, 11,700 in the second half. Costs, using $170,000 per unit as an average, would be $1,140,000,000 for 1961-65 and $1,990,000,000 for 1966-70.

The whole program adds up to $17,070,000,000—and the study moves quickly to balance the books by indicating where and how the industry can raise that kind of money. Six principal sources are covered—retained earnings; normal and accelerated depreciation and the possible creation of construction reserves; tax credits, under the recommended Administration plan; disposal of excess property and a maximizing of revenues from non-carrier uses of rail properties; financial institutions, insurance companies, pension funds and similar sources; and government entities, through loans, tax abatement and subsidy.

Actual estimates of funds to be generated from the various sources appear conservative. The report notes that leasing may become more widespread, and that shippers may provide more facilities—both cars and fixed facilities—than they now do. But neither of these factors is considered in the listing of sources. Likewise, the report makes no estimate of possible benefits from a construction reserve program. And it downgrades the loan guarantee provisions of the 1958 Transportation Act as a significant source of money.

Over the 10-year period, the study estimates that $11,285,000,000—66.1 per cent of the total—will be generated internally, with normal and accelerated depreciation the primary sources.

The traffic projection made by the study—which lead, in turn, to the outline of improvements needed and the estimates of capital availability—are influenced by a series of plus factors (internal and external), tempered by a sig-

Cost of Required Upgrading and Improvements for U. S. Railroads 1961-1970

(in millions of dollars)

ITEM	1961-65	1966-70	Total
WAY AND STRUCTURES			
UPGRADING			
Ties	$ 203	——	$ 203
Rail	122	——	122
Other Track Material	131	——	131
Ballast	91	——	91
Signal and Comm. System	132	——	132
Bridges, Buildings, Other Structures and Labor Costs	1,811	——	1,811
Sub-Total	$2,490	——	$2,490
CAPITAL IMPROVEMENTS	1,250	3,750	5,000
Total	$3,740	3,750	$7,490
EQUIPMENT			
UPGRADING—FREIGHT CARS			
Railroad	$ 100	$ 100	$ 200
Other	24	26	50
CAPITAL IMPROVEMENTS			
FREIGHT CARS			
Railroad	1,906	1,154	3,060
Other	1,695	945	2,640
PASSENGER-TRAIN CARS			
Passenger	219	219	438
Postal and Combo	29	29	58
REA	2	2	4
MOTIVE POWER	1,140	1,990	3,130
Total	$5,115	$4,465	$ 9,580
Grand Total	$8,855	$8,215	$17,070

nificantly shorter list of minus factors.

On the plus side, internally, the report calls attention to the rapidly-developing merger movement; the continued pruning of branch line operations; a diminishing passenger deficit; a "rationalizing" of yards and terminals ("It is no exaggeration to say that the competitive situation of the railroads is seriously hampered by an excess of redundant yards, obsolete in design, useless in function, uneconomic in operation"). The study also sees plus potential in the further refinement of market and technical research; in putting idle capacity to work; in the "quiet trend toward automation;" in continued productivity increases; and in service improvements. One of the most promising indicators in this last area, the report notes, "is the increasing use by railroads of other kinds of transportation for functions which these can perform more economically. . . . These events presage the eventual emergence of integrated transportation companis, employing various transportation technologies, each where it operates to best advantage. There are, of course, many regulatory and legal obstacles to an optimum extension of this trend (but) these will yield in the long run to the benefits which accrue from a rational use of transport resources, particularly as railroad management demonstrates to the public satisfaction that its attachment to the rail technology does not extend to functions more economically performed by competitive modes."

Externally, the report finds hopeful signs in moves toward equity in taxation and user charges; new regulatory attitudes; a "reduction in waste of manpower;" depreciation policy changes; the possibility of subsidy for essential passenger services; changes in government investment policy; and the "fiscal crisis in the highway program."

Only a few minus factors are cited—fear of unemployment on the part of workers in other forms of transportation; suburbanization and decentralization of industry; changes in distribution patterns and traffic composition, involving an increasing need for quick, reliable and flexible service; and, finally, technological advances by railroad competitors.

A strong feeling of enthusiasm for new ideas, for the need to experiment boldly, runs through the report—and is summed up in the study's parting shot:

"High morale consists essentially of pride in one's self and one's work. To develop this pride is the most important job of railroad management in the decade of the Sixties.

"The major tool available for the task is the process of innovation. This is the means by which a business adapts to and profits by change. Essentially, it consists of a continuing acquisition of knowledge and its application to the work being done. There are many ways in which this can be accomplished, but essential to them all is *receptivity to new ideas.*

"Not all new ideas are good, but if enough of them are weighed, the benefits from those with merit will justify the screening effort. Therefore, attention must be consciously devoted to the building of mechanisms to channel the aims and aspirations of many individuals to the railroads' advantage. In effect, the human communications within the industry must be improved. This will hold within the ranks those with something to contribute and make available to management information useful for corporate purposes.

"A willingness to innovate presupposes, not merely consideration of, but action upon untried ideas. For example, a tremendous effort to improve personnel performance seems warranted by competitive conditions. Such devices as standards of work measurement, incentives for superior accomplishment, even profit sharing schemes are not too radical to consider in view of the industry's need for competitive strength.

"At the same time, the industry needs to alter somewhat its view of itself. No longer can railroading be regarded as an isolated function, physically removed from the process of producing the nation's goods. Rail carriers must recognize that today their proper role is as part of the total marketing mechanism for the nation's goods. In this posture, realization of their potential requires performance surpassing that which a shipper himself can provide.

"The economic objective of the modern railroad should be to move each customer's goods in a manner which minimizes the latter's total cost of manufacturing, storing, transporting, packaging and marketing. This minimization of total cost is the proper objective because minimal movement cost does not necessarily equate with minimal total cost, and because change in transportation can well induce or require changes in every other part of the marketing process. . . .

"Only through innovation can goals which encompass better communications, boldness in action, and recognition of a changing function be realized. And only if they are realized can low cost be transmuted to high net."

RPI's executive committee and governing board authorized the Banks study in March 1961—not as an upgrading of the "Ten-Year Projection of Railroad Growth Potential" made in 1956, but as a "completely new look at the future of the railroad industry." George B. Dutton, Jr., directed preparation of the report for Banks.

Sources of Funds for Railroad Improvement — 1961-1970

(in millions of dollars)

	1961-65	1966-70	Total
Estimated Need for Funds	$ 8,855	$ 8,215	$17,070
ESTIMATED SOURCES OF FUNDS:			
INTERNAL:			
Surplus Property Disposal	$ 200	$ 200	$ 400
Normal Depreciation	3,000	3,000	6,000
Accelerated Deprec.	1,100(a)	1,375	2,475
Tax Credit	251	258	509
Retained Earnings	1,045	856	1,901
Sub-Total	$5,596	$5,689	$11,285
EXTERNAL:			
Equipment Obligations	699	708	1,407
Other Obligations to Finance Equipment	466	472	938
Shipper Financed and Maintained Equipment	1,719	971	2,690
Other Funded Debt	125	125	250
Government Assistance	250	250	500
Sub-Total	$3,259	$2,526	$ 5,785
Grand Total	$8,855	$8,215	$17,070
Percent of funds:			
Internal sources	63.2	69.3	66.1
External sources	36.8	30.7	33.9

(a) Years 1962-65.

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...for industrial site seekers

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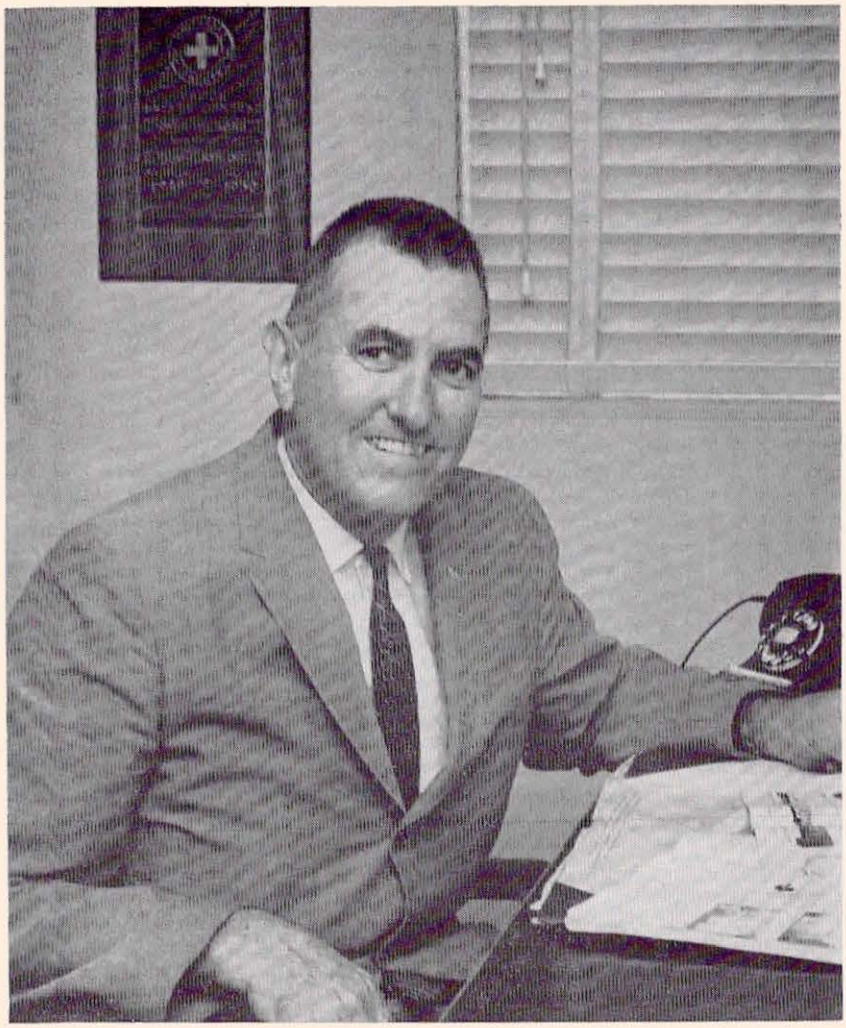
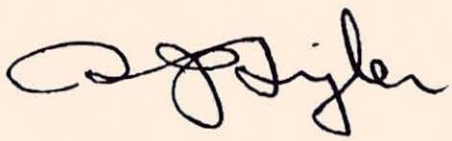
Mr. George W. Cox, Asst. to the President
Santa Fe Railway—80 E. Jackson Blvd., Chicago 4, Illinois



R. J. TYLER
General Traffic Mgr.
Tube Turns

"I have found Railway Age a tremendous asset"

"One of the most important benefits which we have derived from the use of information published in the Freight Traffic Issues of Railway Age is that pertaining to the types of equipment and the railroads' ability to make available its use to the shippers and receivers. Not too long ago we suffered a substantial damage to an important piece of equipment which moved on an obsolete flat car which had been in service for many years. A very short time after we had this unfortunate experience the writer learned that hydraulically-cushioned flat cars were available by certain railroads for this particular type of movement. The fact that your advertiser used your publication to inform the public of the use and availability of these hydraulically-cushioned cars enabled us to move subsequent shipments without damage; also, it was the fact that such cars were available and the damaged shipment moved on a type of car which should have been declared obsolete that was a contributing factor in the settlement of this very large claim. I have found Railway Age to be a tremendous asset in the performance of my duties as General Traffic Manager."



INDUSTRIAL DEVELOPMENT

Virtually every sizeable railroad in the United States and Canada has a special department (or special officer) charged with the primary responsibility of increasing the railroad's traffic by promoting the industrial and agricultural welfare of the territory the railroad serves. This special Railway Age report tells how such departments are organized and operate (this page); what they have accomplished (page 28); and how highly management values their work (page 30).

"American railroads are in the forefront of industrial development," C. R. Lapeza, assistant to vice president—operating of the Atlantic Coast Line, told the 53rd annual meeting of the American Railway Development Association.

The railroads are there because they recognize, individually and collectively, the profound truth of what F. B. Stratton, director of industrial development and real estate for the Western Pacific, said at the same meeting:

"Any railroad which fails to replace lost industries will wither and die. Any railroad which fails to attract new industries will stagnate. In either case, company and employees will suffer."

It is to avoid such "withering, stagnation or suffering" that railroads give high priority to the development activities summarized in these pages.

How ID is organized

U. S. railroads as a whole have close to 1,000 employees assigned exclusively or primarily to industrial or agricultural development work.

The number, per company, may be only one or two on the smaller and more compact carriers. It reaches a high of 145 on the Northern Pacific—including employees involved in management of NP's extensive oil, mineral and timber lands, but not including on- or off-line traffic representatives who may perform some ID duties. Other railroads specifically reporting 20 or more primary I&AD employees are the Santa Fe, the Southern Pacific, the Baltimore & Ohio, the Chesapeake & Ohio, the Milwaukee and the Pennsylvania. The New York Central, Southern and Union Pacific would almost certainly fall in the same group.

On at least 14 roads the work is headed by the president himself, or by a vice president, usually of traffic. On other roads, chief development officers carry a wide variety of titles, all shown by the directory beginning on page 42.

About 50% of the development departments studied by Railway Age in this survey are part of, or report to, the traffic departments of their respective railroads. Nearly all the others report directly to the president or other chief executive officer. In a few cases, they come under the jurisdiction of operating, engineering, financial or other departments. In general, but with a good many exceptions, the tendency is for development officers to come under traffic departments on large railroads; under the executive on smaller lines. In a few cases (e.g., Milwaukee, NP and UP) industrial and agricultural departments are separate and essentially equal, but report through different channels.

Regardless of differences in organizational detail, however, all I&AD departments seem to have one thing in common:

They are an integral part of the railroad they serve, carrying their own weight in the overall traffic plan, but able to call on other departments for assistance when necessary; and regularly receiving help from those departments.

The Southern, for example, points out that, "at 88 sales offices throughout the United States, competent personnel is available for industrial development work." On the Illinois Central, "personnel in 100 sales and service offices throughout the United States, Canada and Mexico develop innumerable prospects," according to its director of industrial development, J. S. Frost. The Louisville & Nashville, says President W. H. Kendall, considers industrial development a function of "the entire railroad organization, from directors and president on down."

What ID departments do

Fulfillment of their basic function of increasing their company's traffic involves railroad industrial and agricultural development personnel in an endless variety of duties, all undertaken with the general objective of increasing industry or improving agriculture in the railroad's territory.

But let some of the men who do the work speak for themselves.

Here are the jobs J. E. Saucier, general development and real estate agent of three small but industrially active railroads, says he and his colleagues do for the Atlanta & West Point, Georgia and Western of Alabama:

"Cooperate with industries, property owners, chambers of commerce and other industrial development organiza-

tions in developing industrial parks and suitable industrial property;

"Make industrial surveys and economic studies;

"Do engineering in connection with industrial sidetracks;

"Make personal calls on industrial executives in the interest of assisting with relocation or expansion of existing plants;

"Furnish traffic, market, labor and tax information;

"Work with industries, contractors, property owners and others in making satisfactory connections for buildings for lease or sale, and buildings to be erected to meet the needs of a particular industry; and

"Develop, advertise and otherwise promote property owned by our railroads, in addition to promoting property adjacent to the railroads, owned by others."

On the Missouri-Kansas-Texas, the Industrial Department headed by W. W. Renfro:

"Maintains current listings of available industrial sites and buildings;

"Compiles brochure-type presentations of plant or warehouse sites;

"Conducts site inspections with industry representatives;

"Develops supplementary data desired by site-seeking industry;

"Acts as intermediary between prospective industry and real estate brokers, landowners, investor-builders and consulting engineers;

"Maintains statistical data pertinent to industrial location studies;

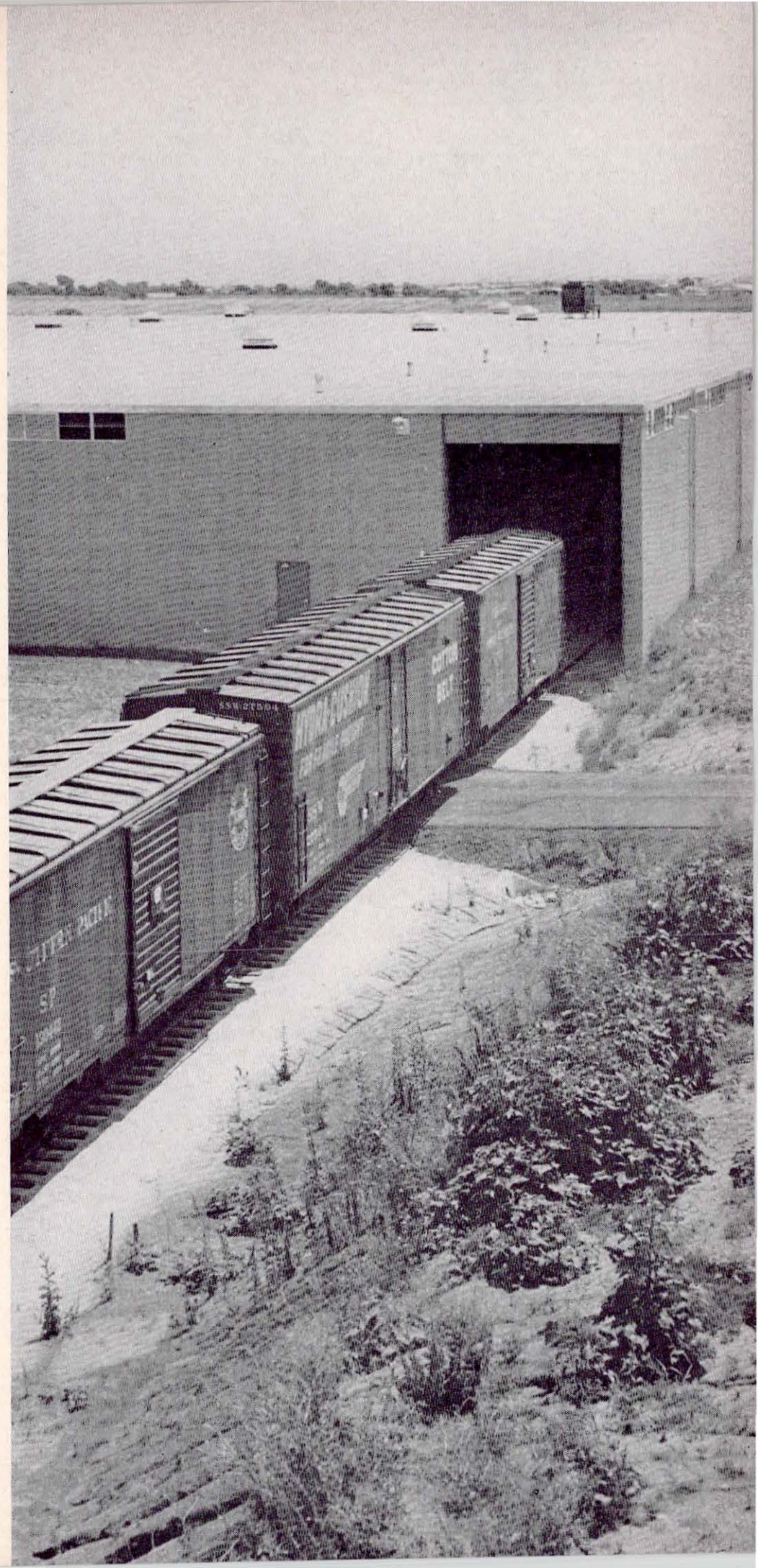
"Acts as a selling or leasing department in behalf of railroad-owned properties, including oil and gas leases; and

"Assists developers in planning, design and engineering of industrial districts."

Railroad after railroad tells essentially the same story, at greater or lesser length. Industrial development objectives, industry-wide, are the same. So are some of the methods used to meet those objectives. Differences, where they exist, are due principally to local conditions, management philosophy and personnel and funds available for promotional work.

Among the similarities:

- All railroad developers are interested primarily, even exclusively, in attracting to their lines businesses which, once established, *will use railroad service*. (Nowadays, of course, there is a realistic realization that few industries are or can be exclusive rail shippers, but a railroad man can't be blamed for wanting a fair traffic shake from a company he helps to locate.)
- All railroad developers will treat, in absolute confidence, inquiries from any legitimate site-seeker.
- All railroad developers cooperate



willingly with other bona fide development agencies, when such cooperation is mutually beneficial—and it usually is.

- All railroad developers spend time, thought, effort and money to publicize their company and their territory to industries interested in expanding or in relocating.

Among the differences—pointed up by the tables on pages 28 and 29:

- Some railroads sponsor so-called industrial parks. Others, like the New Haven, cooperate in development of such parks, but don't sponsor them. Others take no direct part. Park-sponsoring lines, such as the Rio Grande, Burlington and Coast Line, obtain land at strategic points; divide it into factory or warehouse sites; install streets, utilities and rail sidings, and sell or lease the improved land to traffic-generating industries. The actual development work may be carried out by the railroad itself, or by a subsidiary company. The land may be purchased, or merely released from carrier use by some change in railroad operations. In either case, the result, so far as a site-seeking industry is concerned, is essentially the same.
- Most (but not all) railroads own land and buildings (other than industrial parks) for sale or lease to industry.
- An increasing number of railroads —particularly those serving crowded metropolitan areas—are interested in developing air rights over their yards, tracks, terminals or other buildings.
- Different railroads shoot for different objectives, depending very largely on the nature of their territory.

Agriculture, forestry, minerals

All railroads, as stated above, are interested in attracting traffic-producing industries. But Granger lines, plus a good many others, put equal emphasis on agriculture, and they go to great lengths to improve both quantity and quality of agricultural production along their lines.

What the Santa Fe does in that direction is outlined by President E. S. Marsh on page 38. The Union Pacific sponsors an agricultural scholarship program; operates an agricultural improvement car, and otherwise works closely with farmers and farm organizations, on a local level. The Great Northern puts special stress on attraction to its territory of industries which use agricultural products. The Bangor & Aroostook facilitates loans for potato storage houses, and even guarantees their payment for the first three years. The Detroit & Mackinac has promoted fertilizer utilization, established special unloading facilities, and operates a beef-cattle feeding project to demonstrate the possibilities of utilizing low-cost land for cattle feeding yards.

The Illinois Central, the Gulf, Mobile & Ohio, the Seaboard and the Coast Line, among others, put special emphasis on forestry. The IC, says its general agricultural and forestry agent, P. R. Farlow, has developed and promoted use of a mechanical tree planter, gives instruction in the marking of timber for harvesting, and helps in the development of tree farms.

Mineral development, too, comes in for close attention. The Western Maryland, for example, has a special manager of mineral and timber lands, who helps to "manage and develop company and privately-owned coal and timber lands, including acquisition, exploration and proving for coal and other minerals; negotiate leases; engineer new operations, including trackage; advise new and established operators, and develop markets." The GN is paying "increasing attention" to mineral developments. And on the Milwaukee, L. B. Horton, who doubles as commissioner of agricultural and mineral development, has as part of his job the locating of sources and markets for the mining industry.

Publicity and personalities

Differences between railroads show up also in their methods of publicizing their development activities, and to some extent in special projects undertaken in connection with those activities.

Advertising in publications read by industrial executives plays a large part in the development efforts of many railroads. They, and others, too, make extensive use of pamphlets, brochures, or site or community data sheets developed by the railroads or by other development agencies with which they so freely cooperate.

The data sheets may be simple mimeographed or printed sheets, giving high-spot information only about a single location. Or they may be elaborate productions including maps, aerial photographs and full information on just about every point that would interest an industry.

The brochures, in turn, may cover a site, an area or a subject. The New York Central, for example, has a series of pamphlets on such topics as "Water —How Much and How Good" and "Taxes—and What You Get for Them." The UP has a whole series of detailed and copiously illustrated brochures on irrigation, the growing of fruit, potatoes, vegetables and livestock, and the selection of a farm. The Burlington Lines have a thick, ring-bound book giving complete data on sites and industrial parks. The Midland Valley roads (MV-KO&G-OCAA) offer an exceptionally attractive study of the Oklahoma territory they serve.

Some roads have undertaken special development projects. Earlier this year, the Pittsburgh & Lake Erie released an exhaustive study, hundreds of pages in length, titled "Region of Opportunity," which may well be the most thorough and intensive one-volume study ever published of the economy and industrial potential of a single area.

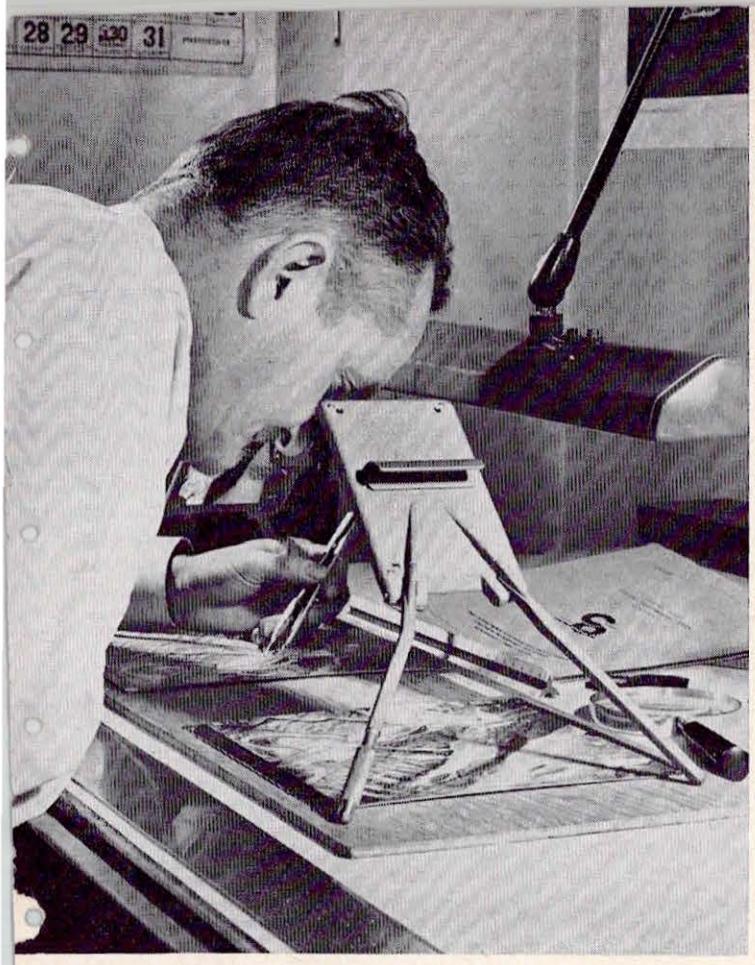
Norfolk & Western is just now receiving the final results of a two-year region-by-region analysis of its entire territory by Fantus Area Research, of New York, the country's largest firm of industrial location specialists. This survey, N&W believes, will be invaluable in its efforts to develop its territory, attract new industries and promote the traffic diversification which is one of the railroad's long-term goals. (Fantus also has made similar studies for the Delaware & Hudson; Chicago South Shore & South Bend; Western Maryland; Midland Valley; Alton & Southern, and Port Huron & Detroit, but none of these was as extensive as its work for N&W.)

Railroad development officers have many jobs. They have also to keep in mind many factors, and deal with many personalities.

Consensus of some 65 men answering a Railway Age survey is that an adequate supply of the right kind of labor is the most important single thing a new or expanding industry considers. Proximity to markets, transportation rates, transportation service, and availability of raw materials, come next, in that order and closely bunched. Taxes play some part, but living conditions, governmental attitude, fuel supplies and climate all appear to be of minor importance if other factors are right.

That ranking, however, is a consensus only. Markets drew more individual first-place rankings than any other one factor. And some of the men queried were unwilling to answer. Factors, some said, vary widely from case to case. Sometimes, others feel, one factor will outweigh all others. And, said Gene Cermak of the Chicago & North Western, there "are about 690 other factors to be considered anyway."

(Continued on page 50)



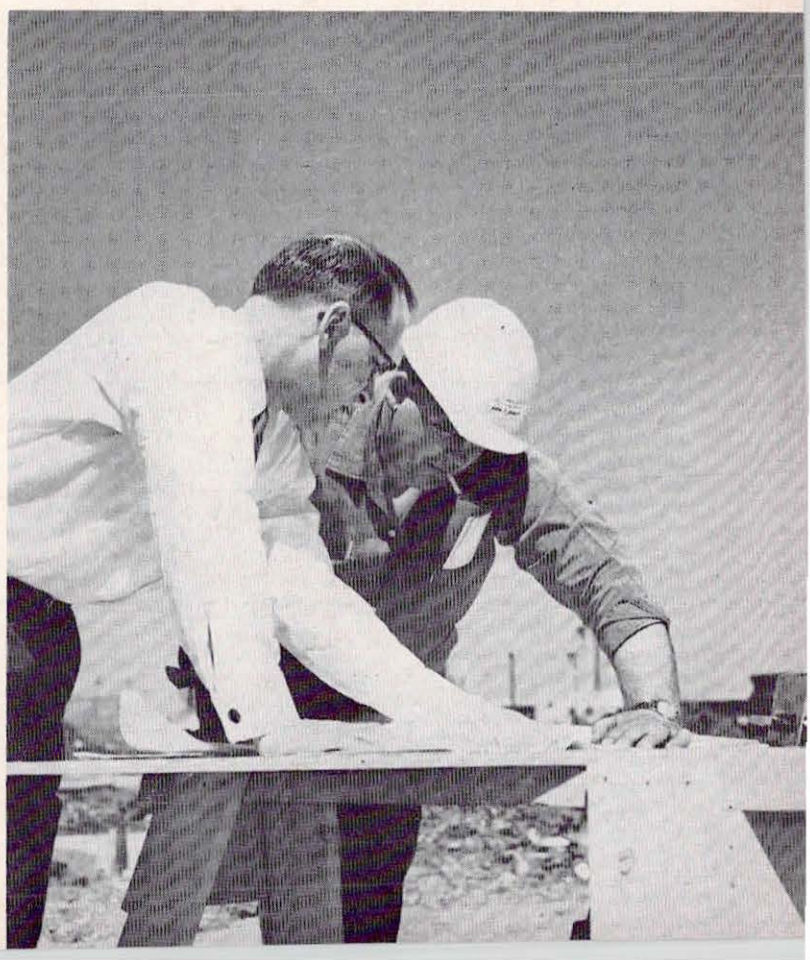
S. B. Paine (Chesapeake & Ohio Industrial Development Research Bureau) examines aerial map of possible plant site.

H. N. Butler and John Connell (Southern) use boat-mounted water jet drill to test for water-bearing sand and gravel.

Railroad I&AD Men Have Many Jobs

Ray Bradsher, right (CB&Q agricultural agent), works in laboratory with Dr. E. C. Howe (University of Nebraska).

J. C. Weiland, left (CB&Q industrial agent) studies plans for warehouse in railroad's Montgomery industrial district.



Industrial Development Box Score

Class I Railroads in the United States

	Sponsors industrial parks or developments	Land available for sale or lease[1]	Buildings available for sale or lease[1]	Interested in developing air rights over:[2]	Industrial projects located or expanded[3] 1961	5-yr avg 1957-61	Estimated new traffic or revenue 1961	5-yr avg 1957-61
Akron, Canton & Youngstown	Yes	Yes	No	Tr	6	8	2,400 Cars $200,000	800 Cars $60,000
Atchison, Topeka & Santa Fe System	Yes	Yes	Yes	....	734	827	131,530 Cars $44,467,053	118,995 Cars $38,174,144
Atlanta & West Point — Georgia — Western of Alabama	Yes	Yes	Yes	Te	69	73	NA	NA
Atlantic Coast Line	Yes	Yes	Yes	No	222	222	39,817 Cars $3,959,563	50,739 Cars $5,037,210
Baltimore & Ohio (including SIRT)	Yes	Yes	Yes	Y; Tr; Te; B	172	179	$5,318,000	$12,291,000
Bangor & Aroostook	No	Yes	Yes	No	4	9	NA	NA
Bessemer & Lake Erie—Union	Yes	Yes	Yes	No	14	33	"It has been significant"	
Boston & Maine	Yes	Yes	Yes	Y; Tr	73	77	10,500 Cars $1,144,500	12,700 Cars $1,384,300
Central of Georgia	Yes	Yes	....	Te	34	44	17,825 Cars	22,520 Cars
Central of New Jersey	Yes	Yes	Yes	Y; Tr; Te	36	36	13,925 Cars $1,089,770	9,068 Cars $695,640
Chesapeake & Ohio	No	Yes	No	....	100	80	21,385 Cars $2,345,240	22,813 Cars $2,836,930
Chicago & Eastern Illinois	No	Yes	Yes	No	32	119	900 Cars	5,000 Cars
Chicago & North Western	Yes	Yes	Yes	Y; Tr; Te; B	318	339	39,358 Cars $5,500,000	NA $5,600,000
Chicago, Burlington & Quincy (including C&S; FW&D)	Yes	Yes	Yes	Y; Tr; Te	656	500	NA	NA
Chicago, Milwaukee, St. Paul & Pacific	Yes	Yes	Yes	Y; Tr; Te; B	156	213	$3,000,000	$4,300,000
Chicago, Rock Island & Pacific	Yes	Yes	Yes	Tr; Te	514	581	$6,257,657	$7,292,440
Clinchfield	Yes	Yes	No	....	19	21	1,000 Cars	1,500 Cars
Delaware & Hudson	No	700 Sale 1,000 Lease	10 Sale 10 Lease	Not at present	21	43	3,250 Cars $500,000	5,000 Cars $750,000
Denver & Rio Grande Western	Yes	Yes	....	....	NA	NA	NA	NA
Detroit, Toledo & Ironton	Yes	Yes	Yes	No	NA	NA	NA	NA
Elgin, Joliet & Eastern	Yes	Yes	No	No	29	NA	6,000 Cars $400,000	NA NA
Erie-Lackawanna	Yes	Yes	Yes	....	109	87	20,660 Cars $3,500,000	15,000 Cars $2,500,000
Great Northern	Yes	Yes	Yes	No	277	270	7,000 Cars	7,500 Cars
Green Bay & Western	Yes	Yes	Yes	No	14	26	1,300 Cars $91,000	485 Cars $33,950
Gulf, Mobile & Ohio	Yes	Yes	Yes	....	135	142	NA	NA
Illinois Central	Yes	Yes	Yes	Y; Tr	98	107	38,056 Cars $5,587,403	38,705 Cars $5,283,151
Illinois Terminal	Yes	Yes	Yes	....	11	47	800 Cars	NA
Kansas City Southern—Louisiana & Arkansas	Yes	Yes	Yes	....	NA	NA	NA	NA
Kansas, Oklahoma & Gulf; Midland Valley; Oklahoma City-Ada-Atoka	....	Yes	No	....	2	1	25 Cars	....
Lehigh & Hudson River	No	Yes	Yes	....	8	....	250 Cars $25,592	....
Lehigh Valley	Yes	Yes	Yes	No	36	49	6,422 Cars $665,025	11,713 Cars $1,309,910
Long Island	No	Yes	Yes	Y; Tr; Te; B	19	21	5,500 Cars $450,000	3,950 Cars $1,350,000
Louisville & Nashville	Yes	Yes	Yes	Y; Tr; Te	255	227	60,000 Cars $9,000,000	49,890 Cars $7,500,000
Maine Central	No	Yes	Yes	Y	....	....	....	....
Minneapolis, Northfield & Southern	No	Yes	Yes	No	8	28	87 Cars $5,000	2,250 Cars $101,500
Missouri-Kansas-Texas	Yes	Yes	Yes	....	101	118	10,070 Cars $1,611,200	17,900 Cars $2,685,000
Missouri Pacific	Yes	Yes	Yes	....	296	313	35,301 Cars	24,080 Cars
Monon	Yes	Yes	Yes	No	16	65	4-5,000 Cars	15,000 Cars
New York Central (including P&LE)	No	Yes	Yes	Y; Tr; Te	306	NA	$33,000,000 plus	NA
New York, New Haven & Hartford	No[4]	Yes	No	Y; Tr; Te; B	172	140	12,920 Cars	....

	Sponsors industrial parks or developments	Land available for sale or lease[1]	Buildings available for sale or lease[1]	Interested in developing air rights over:[2]	Industrial projects located or expanded[3] 1961	5-yr avg 1957-61	Estimated new traffic or revenue 1961	5-yr avg 1957-61
New York, Susquehanna & Western	No	Yes	....	No	13	11	1,455 Cars $95,000	1,400 Cars $84,000
Norfolk & Western	Yes	Yes	Yes	No	250	182	....	....
Norfolk Southern	Yes	Yes	Yes	....	30	19	2,066 Cars	1,932 Cars
Northern Pacific	Yes	Yes	Yes	Y; Tr; Te	108	119	31,000 Cars $7,500,000	33,000 Cars $7,935,000
Pennsylvania	Yes	Yes	Yes	Y; Tr; Te; B	291	331	42,740 Cars $9,987,470	78,037 Cars $13,247,303
Pennsylvania-Reading Seashore Lines	No	Yes	No	No	23	19	1,480 Cars $93,240	2,800 Cars $187,600
Piedmont & Northern	Yes	Yes	Yes	No	16	12	1,217 Cars $448,622	2,112 Cars $795,254
Pittsburgh & West Virginia	Yes	Yes	Yes	No	8	15	....	....
Reading	No	Yes	Yes	Y; Tr; Te	57	NA	NA	NA
Richmond, Fredericksburg & Potomac	Yes	Yes	Yes	No	11	7	602 Cars $39,000	500 Cars $32,000
St. Louis-San Francisco (AT&N; QA&P)	Yes	Yes	....	Tr; Te	120	136	28,730 Cars $3,628,737	26,000 Cars $3,756,000
Seaboard Air Line	Yes	Yes	No	....	138	188	....	....
Soo Line	No	Yes	Yes	....	47	....	3,110 Cars	....
Southern System	Yes	Yes	....	Tr; Te; B	365	321	$9,657,108[5]	$8,487,510[5]
Southern Pacific (including St. Louis Southwestern)	Yes	Yes	....	Te	743	780	NA	NA
Spokane, Portland & Seattle	Yes	Yes	Yes	No	23	NA	NA	NA
Texas & Pacific	Yes	Yes	No	No	55	NA	7,100 Cars $880,000	NA NA
Union Pacific	Yes	Yes	Yes	No	....	....	....	....
Wabash	Yes	Yes	Yes	....	56	60	21,000 Cars $2,350,000	18,000 Cars $2,000,000
Western Maryland	Yes	Yes	Yes	....	44	52	8,474 Cars[6] $1,046,100[6]	16,740 Cars[6] $2,060,000[6]
Western Pacific	Yes	Yes	Yes	Not at present	44	37	4,190 Cars $1,038,829	3,025 Cars $750,000

Other Railroads in the United States

	Sponsors industrial parks or developments	Land available for sale or lease[1]	Buildings available for sale or lease[1]	Interested in developing air rights over:[2]	Industrial projects located or expanded[3] 1961	5-yr avg 1957-61	Estimated new traffic or revenue 1961	5-yr avg 1957-61
Ashley, Drew & Northern	No	Yes	Yes	No	6	NA	1,000 Cars $50,000	NA NA
Canton	Yes	Yes	Yes	No	3	2	500 Cars $8,300	NA NA
Chicago South Shore & South Bend	Yes	500 S; 100 L	No	....	7	20	NA	NA
Detroit & Mackinac	Yes	Yes	Yes	No	7	15	65 Cars $5,500	5,000 Cars $550,000
Kansas City Terminal	No	Yes	Yes	Y; Tr; Te	3	5	2,633 Cars	2,278 Cars
Kentucky & Indiana Terminal	No	Yes	....	....	10	....	1,200 Cars	....
Meridian & Bigbee	No	Yes	....	....	....	3	12,000 Cars	12,000 Cars
Mississippi Central	No	Yes	Yes	No	3	3	....	....
Peoria & Pekin Union	No	Yes	No	No	....	3	5,496 Cars $74,196	27,480 Cars $370,980
Stockton Terminal & Eastern	Yes	Yes	Yes	No	9	12	200 Cars $12,000	800 Cars $135,000
Terminal RR Association of St. Louis	No	Yes	No	Te	....	....	....	....
Union		See Bessemer & Lake Erie						

Railroads in Canada

British Columbia Electric	Yes	Yes	....	....	8	9	1,000 Cars	1,000 Cars
Canadian National	Yes	Yes	Yes	Y; Tr; Te; B	NA	NA	NA	NA
Canadian Pacific	Yes	Yes	Yes	Y; Tr; Te; B	NA	NA	NA	NA

Figures on new projects, traffic and revenues are those supplied by individual railroads. They are not necessarily uniform or comparable as between companies.

NA or .... —Information not available or not released.

[1]Figures, where given, indicate number of acres of land, or number of buildings, available for sale or lease.

[2]Y — Yards; Tr — Tracks; Te — Terminals; B — Buildings.

[3]In most cases, this includes new permanent or temporary manufacturing plants, warehouses, mines or other traffic-generating projects, plus expansions of previously existing projects of the same types.

[4]Will assist in development of industrial parks, but does not own or administer any.

[5]Southern System proportion of estimated gross revenue accruing to all railroads from new or expanded industrial projects on Southern lines.

[6]Figures for 1961 include 5,394 carloads and $809,100 of revenue from mines; 3,080 carloads and $237,000 of revenue from other industrial projects. Five-year average includes 11,460 carloads and $1,614,000 of revenue from mines; 5,280 carloads and $446,000 of revenue from other sources.

What Executives Think of I&AD

Railroad executives, unanimously and without reservation, are enthusiastic about industrial and agricultural development. They are impressed with its past, present and future importance to their companies and to their industry.

They expect it to be continued and expanded.

Their positive views are shown in the following excerpts from statements prepared exclusively for Railway Age by executives of representative carriers.

Rail Pricing Freedom Would Help Industry

A new plant in any community on any railroad makes an interesting statistic, but it only begins to pay off for the railroad when it produces traffic for that railroad to handle. After the flurry of moving in construction materials is over—business which railroads usually get—comes the real test. How much rail service will the plant use? Has the railroad gotten itself a new customer? Or, is it a case of "we want railroad service available but we'll ship by truck"? In all too many cases, a successful plant location effort in which a railroad has participated ends just that way.

We on Southern are determined that such cases will be fewer and fewer in number as we continue our policy of increasing the usefulness of our rail services for all our shippers. We believe this to be the most valuable contribution we can make to the industrial growth of the South. We know it will mean traffic growth for us.

To call this "the most valuable contribution" takes no credit away from efforts of our industrial development specialists nor from others with whom they work in locating new industries. We simply add another strong selling point for them to use.

When a railroad can design new equipment and devise new services to help its customers reduce the total cost of transportation—as Southern has done and is doing—then the advantage of locating or expanding an industry on that railroad grows greatly.

We have studied with our shippers the individualized needs of their businesses—and we are doing it with prospective shippers who are now only industrial prospects. The end we aim for is to provide the most useful service at the most moderate cost. If this calls for special equipment design, we plan it. If service changes are needed, we work such matters out. Where rates are a problem we go as far as the law will permit in making use of Southern Railway attractive. We will be doing much more of all these things in the future, especially when revised transportation laws permit us fuller use of our initiative in giving the shipping public more transportation for its money.—*D. W. Brosnan, president, Southern System*

Accessibility to National Markets

Coincident with the end of World War II, Rio Grande organized Rio Grande Land Company, a wholly-owned subsidiary charged with acquiring land and developing and selling industrial sites. Ready accessibility of national markets had been proved, and the location of Rio Grande was attractive to manufacturers and distributors. The land company has prosecuted its work vigorously. Numerous new and relocated industries are in full operation. Available land embraces more than 1,600 acres of desirable sites.

An example is the new Blakeland Industrial Park, 12 miles south of Denver, which enables industry to become part of a modern pattern advantageous to manufacturer, distributor, worker, and consumers.—*G. B. Aydelott, president, Denver & Rio Grande Western*

Emphasis on Agriculture and Minerals

Because agriculture is the basic industry on which Great Northern depends for a substantial portion of its revenue, our development forces devote a large part of their total effort to attracting to the railway industries utilizing farm and ranch products. But an appreciable amount of activity also is focused on development of mineral and other resources, and this facet of industrial location is receiving increasing attention.

Development of prospective industries is progressed through community and resource surveys, which inform our sales and service people on the potentials of GN territory and the volume and availability of the region's resources.

Industrial development personnel are qualified to provide inquirers with plant location costs, sources of raw material, probable market potentials and availability of sites and buildings.

Information also is provided on the labor market, utilities, water supply, transportation and other major data pertinent to new and expanded plant location.—*John M. Budd, president, Great Northern*

Aggressive Development Program

The Chicago South Shore & South Bend has entered upon an aggressive program of industrial development that we feel will contribute to its own profitability while accelerating the inevitable growth of northwest Indiana. We were fortunate in obtaining the services of C. A. Ernst, a veteran of 22 years with the Chicago & Eastern Illinois, to form a new industrial development department last November.

The area we serve is next door to Chicago, the nation's transportation hub. Thus we are able to maintain freight interchange connections with 22 other major and area railroads. Indiana . . . is a wonderful place to live, to work, and to prosper industrially. The South Shore Line hopes to participate in and to accelerate its growth.—*W. P. Coliton, president and general manager, Chicago South Shore & South Bend*

Attention to Inquiries

We on the Toledo, Peoria & Western aggressively seek new industries and pay a great deal of attention to inquiries about plant sites. Most of the negotiations are carried on by me personally, which I think indicates to the site seeker a personal interest in his problem.

We approach the prospect in about the following language: "If you are now actively engaged in search for a plant or warehouse site in the Midwest you will find many good locations.

"Our six industrial districts are, obviously, not your only choice. But the particular combination of advantages they offer are found so infrequently that, after thorough investigation, you may agree with those large and successful corporations which have recently decided that a site here represents the best choice among the many under consideration. . . . Your phone call or letter will bring a prompt response, strictly in confidence."—*J. Russell Coulter, president, Toledo, Peoria & Western*

Economic and Technical Assistance

The Chesapeake & Ohio's Industrial Development Department is designed to provide economic and technical assistance to prospective rail-using industries seeking new locations, and to existing on-line industries, for purposes of developing new or expanding traffic, and to promote the general economic development of areas contiguous to the railway.

The large number of important industries located along the C&O since 1950 represent an important part of the railroad's continuing program of diversification. They may well represent the primary reason why C&O's merchandise freight tonnage increased between 1950 and 1960 when the trend of this traffic handled by most railroads in the East had been definitely downward.—*James E. Doyle, vice president—merchandise traffic, Chesapeake & Ohio*

Automation Brings New Opportunities

A successful industrial development program protects a railroad's lifeblood, since the traffic handled depends in large measure upon number and growth of industries on-line.

The age of automation gives us new opportunities. Some existing plants, rendered obsolete by automated methods, can be replaced at less cost than they can be modernized. This gives us two opportunities—to locate the new plant, and help find some other traffic-producing use for the old one. Thus we serve the community by helping to sustain and expand employment, and tax income, while protecting our traffic sources.

No on-line industry can be considered as "captive" today. Highways and rivers are powerful competitors, with built-in advantages from regulatory and tax inequities. We are meeting that situation with constantly improving service, expanded TrucTrain operations linking highway and rail transport with maximum efficiency, and a continuing all-out effort by our Industrial Development Department.—*A. J. Greenough, president, Pennsylvania*

CONTINUED ON PAGE 32

Real Service for Prospective Industries

Increasing traffic potential is the economic life blood of any transportation company. We realized long ago that we could not just sit around and wait for new industry to come looking for us. Rather, we embarked on an aggressive program of selling industry on the Southeast.

This has taken the form of providing real services for prospective industries, such as technical advice and assistance relating to transportation problems from geologists, foresters, engineers and traffic experts. Site data brochures covering several hundred Coast Line communities provide information on water supply, soil conditions, labor availability, and, in fact, all phases of what an industry on the move is looking for. In addition, Coast Line has invested millions of dollars in buying acreage for development into industrial parks; and budgets a sizeable amount each year to reach the decision makers of American industry through a national advertising and promotion campaign featuring advantages of locating in the Southeast.—*W. Thomas Rice, president, Atlantic Coast Line*

On-Track Sites Most Desirable

Plant site selection is, at best, a complicated decision for management. Hundreds of factors must be explored and checked out in advance; any one may adversely affect profitable operation of a new plant. To do this job well, industries would require a sizeable staff skilled in such diverse areas as engineering, law, real estate, transportation, taxes, labor, markets, community services, political and business climates. North Western, literally, offers this "staff" to site-seeking industries. To industries looking for a new home, we say "Our specialists are at your service, but not on your payroll," and we mean just that. Our work is meticulously tailormade to the specifications of each industry looking for a new home, however small.

There is a growing awareness that transportation methods and technology may be at the threshold of dynamic change and innovation. Proposed regulatory reforms, developments in piggyback and containerization, new concepts in rates, point toward the desirability of "on-track" sites. A plant site with railroad service, or accessibility to trackage, could be the best long term "insurance" an industry can buy.—*Ben W. Heineman, chairman, Chicago & North Western*

Anticipates Future Demands

The St. Louis-San Francisco has met with encouraging success in attracting new industries. Our Industrial Development Department keeps up a continual feeling-out program, trying to anticipate future demand for industrial locations. To meet this demand, we have made—and continue to make—prudent investments in property which can be offered to desirable industries.

The center of population is moving westward. Our territory will receive increased attention by industries seeking good labor supply, favorable tax policies, adequate water resources and opportunities to grow. We intend to cooperate actively with chambers of commerce, civic groups, utilities and anyone else to point the way.—*Clark Hungerford, president, St. Louis-San Francisco*

Helps Attract Newcomers

The Illinois Central, going all the way back to its founding days, has followed a program of helping to attract newcomers to the lines of the railroad. Today the Illinois Central has the largest department of agricultural and forestry agents on any railroad in the country, as well as an expanding industrial department.

The importance of plant location may be seen in the fact that, in 1961, new construction and expansion represented a total investment of more than $115 million. This will bring the Illinois Central more than 38,000 carloads of new business and estimated annual revenues of $5½ million.

The prospect for new plants and expansions in 1962 is excellent. We expect construction to top $125 million.—*Wayne A. Johnston, president, Illinois Central*

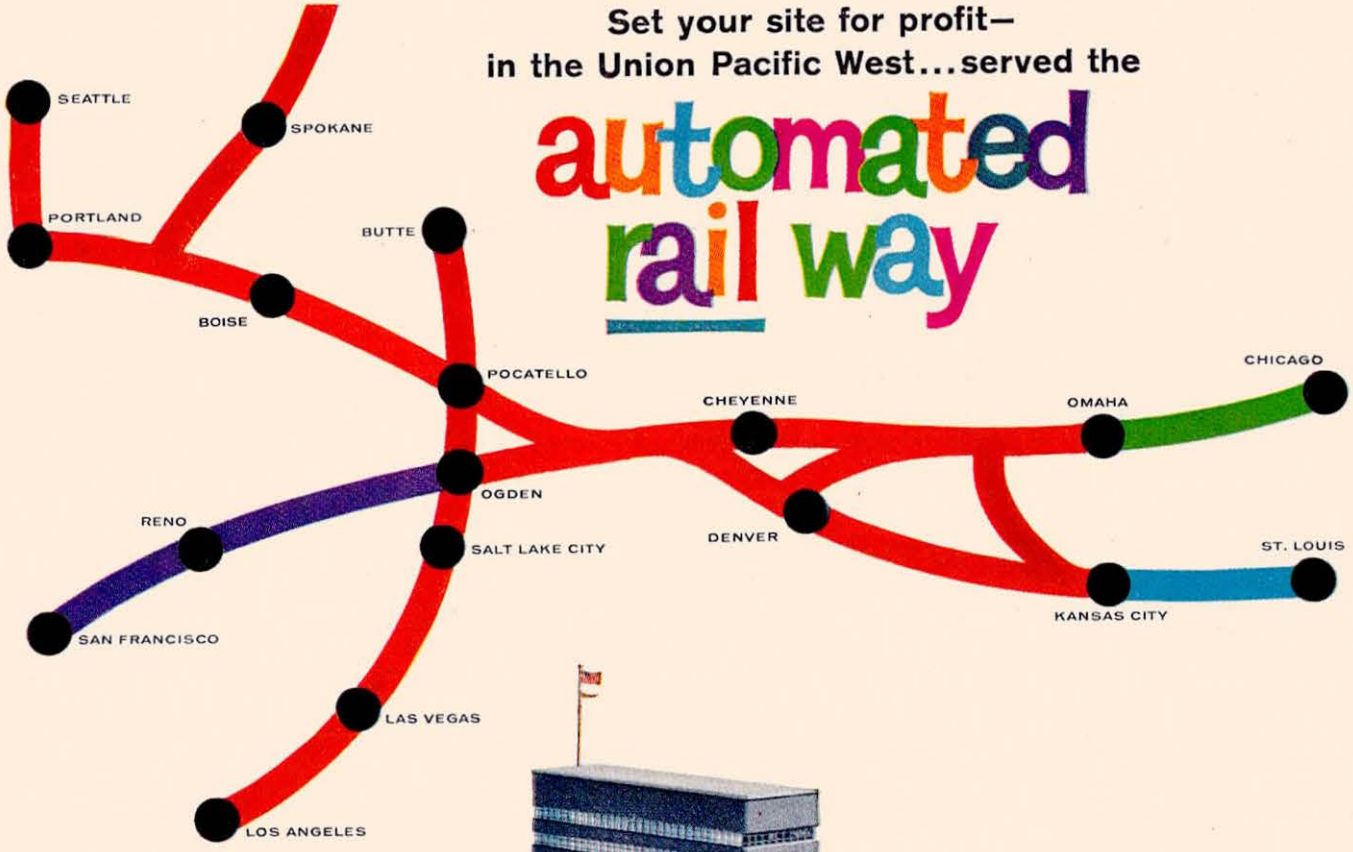
Smaller Communities Offer Much

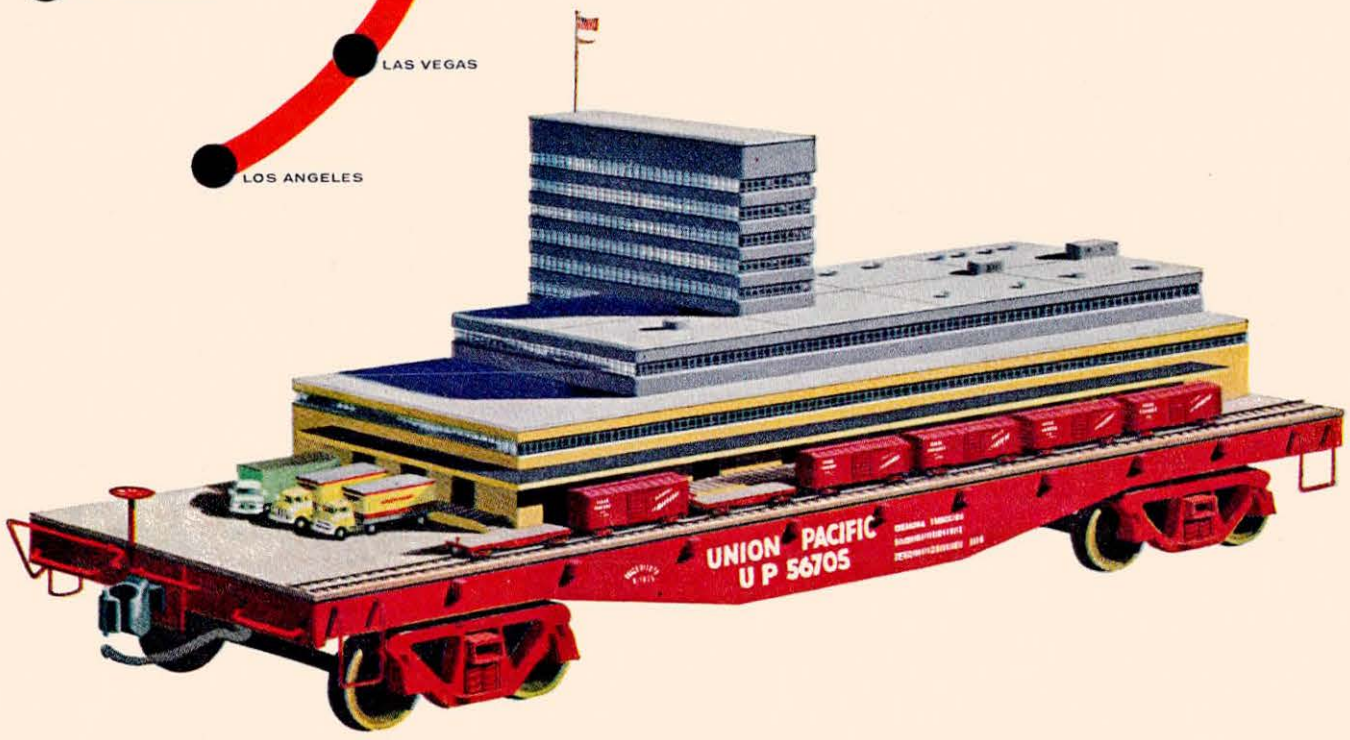
Our development planners have shown forceful initiative in selling "Rock Island Country" to expansion-minded companies. Primarily, the Rock Island has concentrated on marketing choice industrial sites in 12 key areas. We recognize also that smaller communities

CONTINUED ON PAGE 37

Set your site for profit— in the Union Pacific West...served the

automated rail way





For your new plant or warehouse, consider sites along the route shown here.

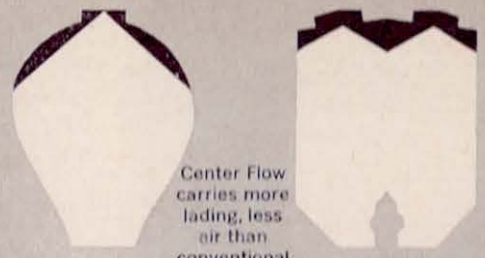
This is the growingest area of the United States, where 9 out of 10 industrial markets are outpacing the national growth.

When you locate along Union Pacific, your freight moves the automated rail way—smoothly, swiftly, dependably—thanks to electronic communications and extensive automatic traffic controls.

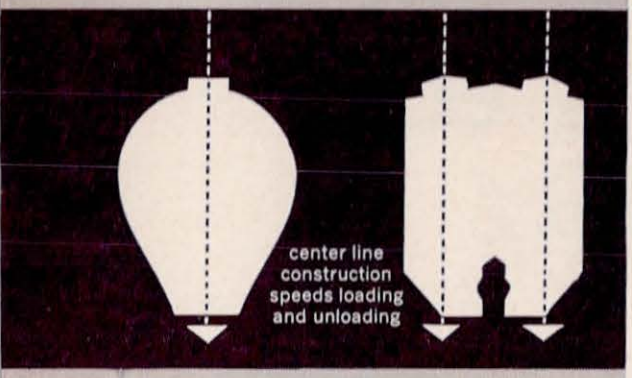
For suitable sites in the West, write to Industrial Development Dept. Inquiry confidential.

U.P.
UNION PACIFIC
Railroad
OMAHA 2, NEBRASKA

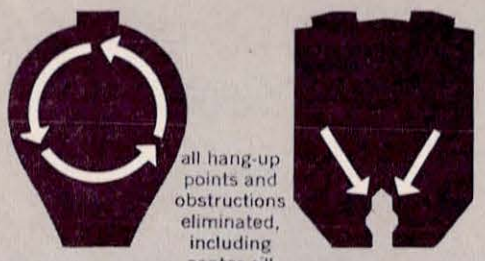
In a Domeliner you travel at 'see' level. No driving strain or highway hazards. Just rest and relaxation. Pullman and Coach.



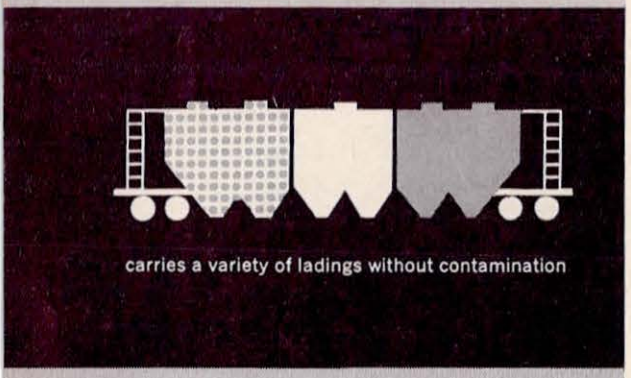
Center Flow carries more lading, less air than conventional cars



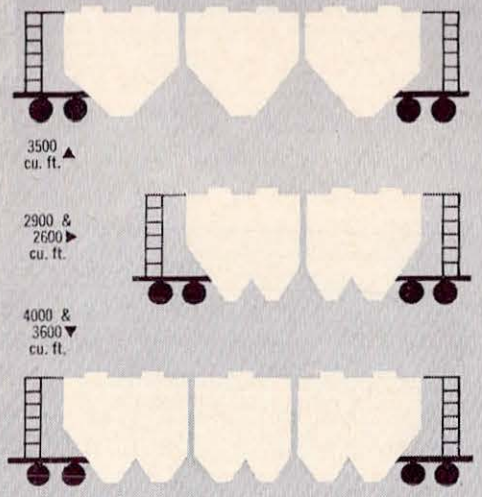
center line construction speeds loading and unloading



all hang-up points and obstructions eliminated, including center sill



carries a variety of ladings without contamination



modular construction permits Center Flow to be manufactured in different capacities.

REVOLUTIONARY NEW

CENTER FLOW

BULK MATERIAL CAR LOADS AND UNLOADS FASTER, CLEANER, EASIER

ACF's new Center Flow can carry a wide variety of ladings, including plastic pellets, chemicals and foods such as flour, malt and other grains. Its clean interior, free from sharp angles and ledges, speeds loading and also facilitates quick discharge with either gravity or pneumatic outlet. The Center Flow's design versatility enables it to be manufactured in different capacities to provide the most economical transport of commodities of varying density. A further design advantage lies in the fact that the number of unloading hookups can be tailored to meet individual requirements.

FOLLOWING ARE SOME OF THE FEATURES WHICH POINT UP THE ADVANTAGES OF THIS REVOLUTIONARY CAR:

LOADING

- Center line hatch arrangement allows for faster, easier loading.
- Light weight increases payload.
- More effective use of cubage.

UNLOADING

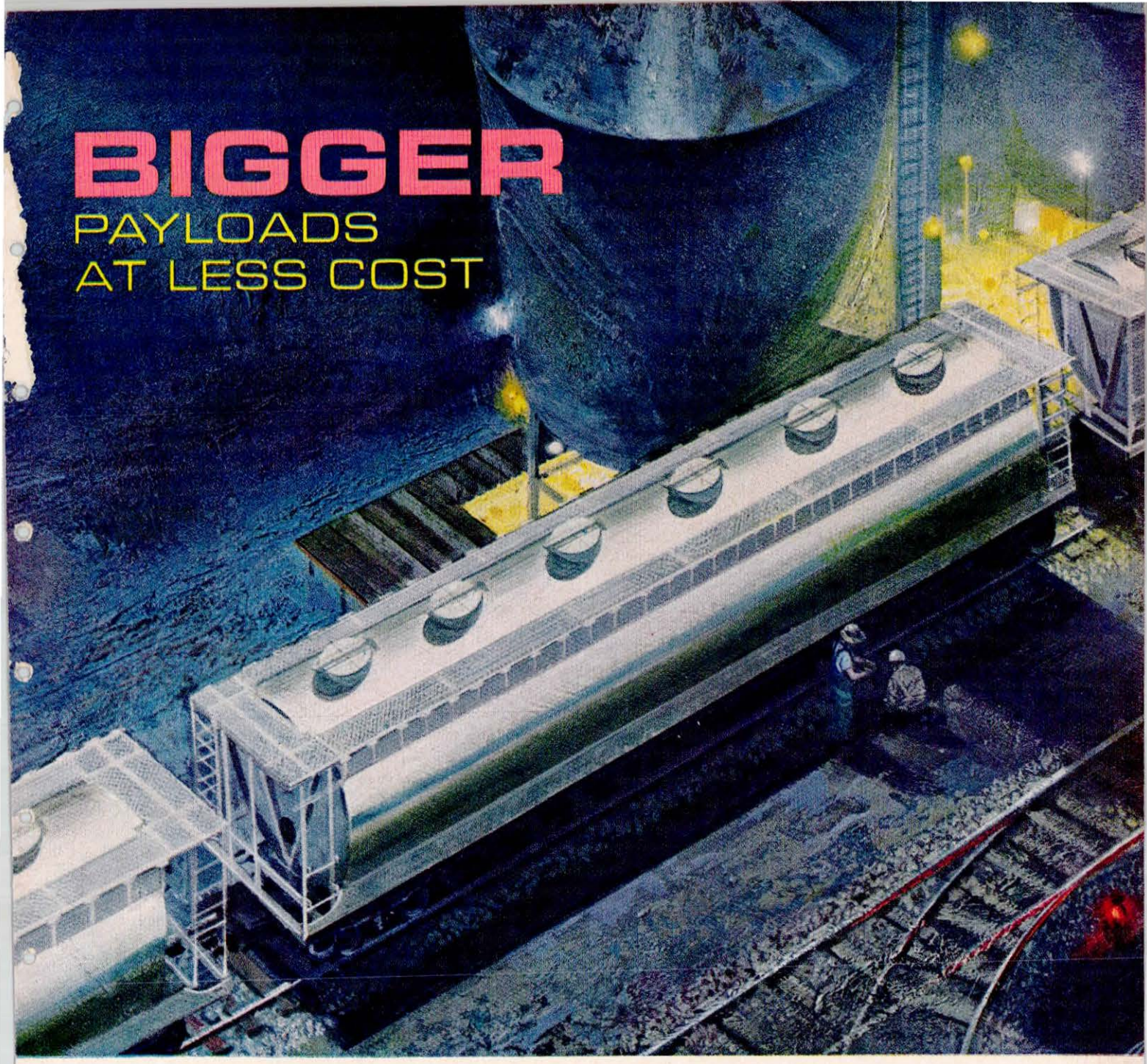
- Center line unloading.
- 50° slope angle allows faster unloading.
- Either pneumatic or gravity outlet.
- Single or double outlet per compartment as desired.

CONSTRUCTION

- Manufactured in aluminum or steel.
- Fewer hatches.
- Elimination of center sill.
- Elimination of side stakes, and carlines.
- Lower center of gravity.

CONTAMINATION-FREE

- Ease in lining preparation.
- "Clean Bore" design—self cleaning.
- Easier clean-out or flush-out.
- Individual compartments.
- Gasketed hatches with screw-down covers when required.



The revolutionary new Center Flow is the most advanced bulk material car ever built. Manufactured in either aluminum or steel, its large capacity enables it to carry bigger payloads than any bulk material car now on the rails, while its clean bore design and center line construction assure quick, clean and easy loading and unloading of dry bulk commodities.

Write for new brochure describing the many advantages the Center Flow bulk material car can offer your organization.

AMERICAN CAR AND FOUNDRY DIVISION, ACF INDUSTRIES, 750 THIRD AVE., N. Y. 17, N. Y.

SALES OFFICES: NEW YORK • CHICAGO • CLEVELAND • ST. LOUIS • SAN FRANCISCO • WASHINGTON, D. C. • HUNTINGTON, W. VA. • BERWICK, PA. • MILTON, PA.

AMERICAN CAR AND FOUNDRY
DIVISION

ACF INDUSTRIES

CHOICE PLANT SITES IN THE SEABOARD SOUTHEAST

Along the more than 4,000 miles of Seaboard's lines traversing Virginia, North Carolina, South Carolina, Georgia, Alabama, and Florida, there are numerous plant sites, large and small, where labor is plentiful and where other factors are highly favorable to profitable industrial operations.

It is in this area that industry has shown such outstanding growth in recent years. For a plant or branch operation let us help you select a site in the Seaboard Southeast—the proven ground for industry.

An outline of your requirements will bring prompt recommendations supported by full details. There is no obligation and your inquiry will be held in strict confidence.

Address: Warren T. White
Assistant Vice President
Seaboard Air Line Railroad Company
3600 W. Broad Street
Richmond, Virginia

have much to offer certain industries planning expansion or relocation. Currently, we are beginning a promotional activity devoted to our "small town" industrial potential. Cooperation we get from these cities is impressive.

Every civic group, utility and transportation company is competing vigorously for new industry. In common with all developers, a railroad must offer sites with suitable labor, raw materials, power, housing, community and commercial services, favorable climate, recreation facilities, etc. Above all, it must provide fast, dependable transportation service to complete the marketing circle. On the Rock Island, we are conscientiously dedicated to fulfilling these requirements.—*R. Ellis Johnson, president, Chicago, Rock Island & Pacific*

A Job for the Whole Railroad

The Louisville & Nashville has long carried on a sustained, aggressive industrial development program, not only through a separate department, but with the entire railroad organization, from directors and president on down.

To insure that industrial prospects can be satisfactorily located and served, the L&N purchases land in strategic locations and, where necessary, extends industrial lead tracks to tap new areas.

The L&N recognizes the need on occasion to provide existing and new industries with freight rates that will keep them competitive, and adjustments are made consistent with sound business judgment. Special equipment needs, which are a problem for certain industries, are being met as they can be justified. Our intensified piggyback program is aiding materially in satisfying the shipping requirements of many of the new industries.

These activities should debunk the view held by the uninformed that the railroad industry is becoming decadent and lacking in progress. —*William H. Kendall, president, Louisville & Nashville*

Personalized, Free, Confidential

The importance of industrial and agricultural development has been recognized by the Baltimore & Ohio since 1888. Revenue from new plants continues to point up the extreme importance of such activity.

That importance has justified a staff of trained personnel, including engineers and geologist, backed by specialists in taxes, real estate, traffic, law and others. This combination of trained people enables B&O to offer a prospective industry a valuable personalized service, which is free of charge, and strictly confidential.

Our Industrial Department has record of more than 800 sites ranging from one acre to several thousand. Information includes topography; size and shape; accessibility of highways, gas, water, sewer and power lines, and ground and surface water conditions. Ownership, taxes and zoning, all are covered in special reports prepared to meet the industry's requirements. Community data are also supplied to assist industry management in evaluating the area's economic climate and reaching a decision as to whether the location offers their employees a good place to live.—*Jervis Langdon, Jr., president, Baltimore & Ohio*

Rail Transport Is Economical

Today's highly competitive atmosphere in manufacturing and marketing offers new opportunities to railroads in industrial development of their territory.

Transportation is a major item in the fixed expense of doing business. As industrial firms seek ways to cut transportation costs, they are taking a fresh look at the economies inherent in rail transportation.

The N&W Industrial Development Department works closely with industrial prospects to help them project transportation savings.

We are spending more than $1 million annually in our program for economic development of our six-state area, and our intensified efforts are achieving real results. Last year and 1960 were the best two consecutive years in the history of our railroad. They brought capital investment of more than $324 million in 475 new or expanded plants and distribution facilities along the N&W which created over 22,000 new jobs.

A two-year survey by Fantus Area Research, Inc., of industrial potential throughout our territory will be completed soon. This unique study is already a valuable aid in finding the best "locational fit" for a wide variety of manufacturers.—*Stuart T. Saunders, president, Norfolk & Western*

CONTINUED ON PAGE 38

Comprehensive, Cooperative Service

Our Properties and Industrial Development and Agricultural Development Departments are staffed with specialists in industrial development, forestry, mining, geology, engineering, agriculture and range management. We can offer new and expanding industries the finest in plant location services. In cooperation with banks, utilities, chambers of commerce and state and local agencies, we are able to provide a comprehensive service to those interested in these activities. Inquiries made directly to the company or any of its traffic representatives are handled on a strictly confidential basis.

Whatever the business, large or small, NP stands ready to serve and invites inquiries about any area we serve.—*Robert S. Macfarlane, president, Northern Pacific*

Compact Operations Release Land

Serving over 400 industries, and handling several hundred thousand carloads of local industrial traffic per year, are prime reasons for this company to maintain a vital interest in continuing industrial growth. This industrial activity, which is in addition to the Terminal's interchange of overhead traffic, depends to a large extent on the quality of transportation service provided and the availability of industrial sites.

We have been steadily compacting our plant to simplify switching operations and provide more rapid service. This compaction has also released land for industrial purposes. There will be more developments along these lines in the future.—*G. W. Maxwell, president, Terminal Railroad Association of St. Louis*

Advance Planning Essential

In connection with relocation and construction of tracks due to plant expansion, advance planning by industry and railroad is extremely important, to eliminate possibility of creating operating obstacles which later make it difficult for the railroad to serve the plant. Advance planning assures that tracks will be so arranged that the railroad can serve efficiently and expeditiously.

In contrast, we are at present working with a fertilizer company which located several miles from a railroad. This plant has now expanded into heavy equipment construction not related to fertilizer equipment. The size of the equipment necessitates that it be shipped by rail. It must be handled by truck to our nearest siding and then be reloaded on flat cars. Land at comparable cost was available along our railroad, and these added shipping costs could have been eliminated if this industry had contacted our Manager of Industrial Development before deciding where to locate.—*H. Weldon McGee, president, Green Bay & Western*

Promote Realistic Programs

Santa Fe's industrial and agricultural specialists, working with business and civic leaders, formulate and promote realistic industrial and agricultural programs.

Upon learning a concern is contemplating locating a new plant, the Santa Fe Industrial Department determines the company's requirements and the general area in which it is interested. It prepares a custom survey containing detailed information on all Santa Fe served locations which meet the specifications. If the industry wishes to remain anonymous, Santa Fe representatives will act in its behalf.

Our agricultural agents serve at national, regional and local levels on projects affecting agriculture, including research, marketing, irrigation and conservation. They maintain constant watch over growing crops, estimating the number of carloads which will move over Santa Fe, to assist other departments in arranging car supply and distribution. Federal agricultural programs are analyzed to determine their effect on the road's agricultural traffic. This department publishes a monthly "Crop Report," which has developed a reputation as a dependable source of information. Agricultural agents assist in administering the Santa Fe Scholarship and Award program for 4-H and FFA members. Appearing as speakers at meetings and as judges at fairs, they serve as a vital link between agriculture and the Santa Fe.—*E. S. Marsh, president, Atchison, Topeka & Santa Fe*

Piggyback Gives New Flexibility

Territory of the recently-merged Erie and Lackawanna railroads can best be described as "Expansion Land." Consolidation of facilities is bringing increased possibilities for new

industrial and business sites. Completion of our modern electronic freight yard in Buffalo next year, for example, will make available approximately 100 acres of prime industrial sites when the present yard is abandoned. E-L also is actively working toward opening up New Jersey "meadowlands," virtually in the heart of America's greatest concentration of people.

Development of piggyback is giving more flexibility to industries in location of new plants away from railroad sidings.

Our Industrial Development staff has investigated and analyzed the advantages of potential plant sites to meet requirements of various types of industries. These confidential up-to-date surveys can save time and money for businessmen looking for a new location in a favorable environment.—*M. G. McInnes, president, Erie-Lackawanna*

Fully Developed for Industry

The importance of an effective railroad industrial development program cannot be overemphasized. While an expanding population obviously brings with it a general increase in total freight traffic potential, there is no assurance that this increase will automatically stimulate the business of any particular railroad. Our program stresses the provision of fully developed industrial areas in the major cities on our system, which then can be offered to a variety of industries.—*A. E. Stoddard, president, Union Pacific*

Highly Trained Staff

On the Milwaukee Road, industrial and agricultural development work are activities of very long standing, with well established roots in industrial areas and farming regions served by the railroad. Both departments are staffed by highly trained individuals whose efforts to keep abreast of changing needs in their respective fields have earned for their organizations the reputation of being among the most active in the railroad industry.

The forest products "supermarket" created by our Real Estate and Industrial Development Department in its Franklin Park Industrial District is typical of how a railroad and the industries it serves can work together to mutual advantage.

New concepts are also at work in the Agricultural and Mineral Development Department to improve crop and livestock production, and to help locate agricultural and mineral industries in Milwaukee territory. Typical of this department's work is its cooperation with local people and government agencies in bringing reclamation to such areas as the Columbia Basin of Washington.—*William J. Quinn, president, Chicago, Milwaukee, St. Paul & Pacific*

Cooperation with Communities

The Burlington, C&S and FW&D cooperate actively with communities along their lines when acquiring property for industrial development. This policy has proved beneficial both to communities and railroad.

Recently a 474-acre industrial park was opened at Naperville, Ill. Another new park adjacent to Aurora and Montgomery, Ill., is enjoying rapid growth. Our Denver districts have paced the sizeable postwar growth of that area, and other property in the Denver area is being readied for development as older districts become fully occupied. Perhaps the most remarkable development on our system has been the Paseo Industrial District at North Kansas City.—*H. C. Murphy, president, Burlington*

'Operation Turnkey'

The New York Central System is fully committed to a dynamic program of industrial development and expansion. This is offered through its "Operation Turnkey." The Central has a trained, experienced staff which will marshal and report all relevant facts for sound, fast decisions by business executives or governmental officials. These services include: (1) For site location — a general market analysis, a report and analysis on labor, utilities, taxes, land costs, community services and transportation costs; (2) for design and construction — assistance in preparation of plans and specifications, supervision of contract letting, evaluation of bids and, if needed, supervision of construction; and (3) for financing —assistance in obtaining capital funds and working out favorable terms of occupancy.

Whatever the nature of the business, wherever the location, industry or government can get objective advice and help from Central through its "Operation Turnkey."—*A. E. Perlman, president, New York Central*

CONTINUED ON PAGE 40

Property, Power, People

In furtherance of our industrial development program, the P&PU recently purchased approximately 500 acres of land adjacent to our main tracks and having a frontage of over a mile on the Illinois River. This property lies between Peoria and Pekin in the switching district which provides fast and efficient rail transportation. We have facilities for handling piggyback cars for inbound and outbound movements at our terminal. Electric power, water and gas are available. The nearby cities of Peoria and Pekin provide excellent schools, shopping and recreational areas.—*G. J. Willingham, president, Peoria & Pekin Union*

Benefits of Dealing with Railroad

Industrial development is vital to railroads for protection of present business, and essential to production of the new business needed to grow. It is a prime objective.

We find that more and more industrial companies are recognizing the benefits of dealing with a railroad when considering a site for relocation or expansion. The broad range of services, carefully selected sites, reasonably priced land, and the security of doing business with a major railroad, all save time, worry and money for our shipping friends. WP's program has brought many new blue chip names to our line. We look forward to a more rapid rate of industrial growth in the latter half of the 1960's.—*F. B. Whitman, president, Western Pacific*

Best Thing for Our Area

The Seaboard Air Line has long felt that one of the most important promotional activities it could undertake is that of aiding in industrial development of the territory it serves. That conviction took concrete form before the turn of the century. Now, some 60 years later, we are no less convinced of the value of development work. Methods and procedures have changed, but the basic aim remains the same — to give every assistance we can to communities along our line in bolstering and expanding their economy through location of new industrial and commercial operations.

It will be our policy in the future, as in the past, to see that nothing is left undone to attract logical prospects to our area and thereby contribute to the upbuilding of our territory. —*John W. Smith, president, Seaboard Air Line*

Package Deals Mean Complete Service

As early as 1904, the Delaware & Hudson recognized the importance of industrial development. It then established and has since maintained its Industrial Development department. To assist industry seeking a site, plant, or warehouse, the department catalogs information covering available properties. Details concerning markets, natural resources, labor, water, power, taxes and transportation can readily be furnished.

"Package Deals" comprise a complete service rendered by the railroad.

Advantages to the railroad are location of traffic producing industries along its line. Advantages to industry are location of its business where resources and markets enable it to operate profitably.—*William White, president, Delaware & Hudson*

Three Methods of Approach

A railroad has both the need and responsibility to make every effort toward intelligent and attractive industrial development for the area it serves.

Our efforts take these main routes:

1) We work closely with communities along our lines, encouraging them to protect their industrial potential with proper zoning and effective planning. Industry must have the proper climate in which to live; a stable community with a healthy environment for the industry's people; sound governmental policies; an encouraging tax program and well developed utility services.

2) We work closely with private developers. Some of the finest and most modern industrial planning today is being done by people who, working closely with rail and industrial specialists, are laying out and developing planned industrial districts.

3) We are acquiring and developing industrial properties ourselves.

These are only common sense recognition that industry is vital to our welfare, and that it can only come through sound, intelligent planning by the community, by developers, and by the railroad.—*D. J. Russell, president, Southern Pacific*

Roller or Solid?...a bearing specialist's answer

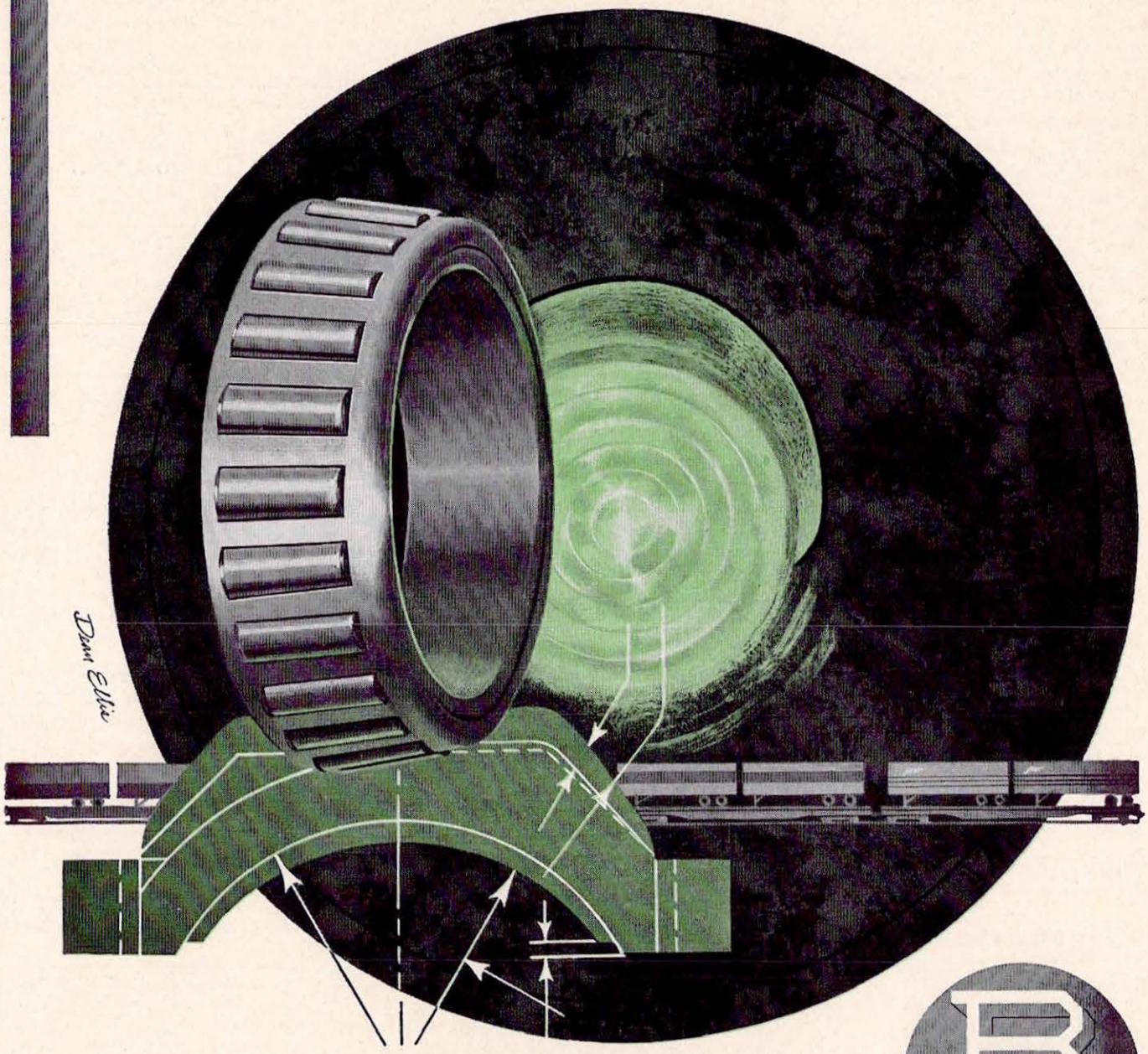
Our belief is that *both* bearings have a job to do.

In general... as much new equipment as possible should have roller bearings – particularly, fast-freight, high-mileage cars. The roller bearing is the only *final* answer to the hot-box.

On the other hand, solid bearings will be needed on existing equipment for many years to come. Low in cost and rugged, they give excellent service.

For these reasons Brenco is the only manufacturer who makes both types and specializes exclusively in railroad bearings.

Brenco bearings... more than a million in service!



BRENCO INCORPORATED

316 East Main Street, Richmond, Virginia

BRENCO BEARINGS

Who's Who in Railroad I&A Development

To emphasize the importance which railroads put on industrial and agricultural development:

Virtually every Class I carrier in the United States and Canada, and many smaller lines as well, have made it a primary responsibility of one or more men, or of a whole department.

The directory which follows shows, railroad by railroad, who those men are, the titles they hold, and the addresses where they can be reached. Names in large type are those of the principal development officer or department head on each railroad; smaller type shows other individuals or offices to which development inquiries may also be sent.

Akron, Canton & Youngstown

J. E. Savely, Vice Pres.—Real Estate, 12 E. Exchange St., Akron 8, Ohio.

Ashley, Drew & Northern

H. M. Braswell, Vice Pres.—Traffic, Crossett, Ark.

Atchison, Topeka & Santa Fe

G. W. Cox, Assistant to President, 80 E. Jackson Blvd., Chicago 4.

Any Santa Fe freight sales office.

Atlanta & West Point—Georgia—Western of Alabama

E. P. Barbre, General Industrial Agent, 4 Hunter St., S. E., Atlanta 3, Ga.

J. E. Saucier, General Development and Real Estate Agent, same address.

Atlantic Coast Line

R. P. Jobb, Assistant Vice Pres., 500 Water St., Jacksonville, Fla.

J. H. Lines, Assistant to Vice Pres., 220 E. 42nd St., New York, N. Y.

T. J. Whitton, Industrial Agent, Chicago.

J. D. Bozard, Industrial Agent, Atlanta, Ga.

Baltimore & Ohio—Staten Island Rapid Transit

A. W. Knabe, Director Industrial Development, Room 1202, B&O Bldg., Baltimore 1, Md.

G. E. Ference, Regional Mgr., 25 Broadway, New York 4.

A. C. Todd, Regional Mgr., Temple Bar Bldg., Cincinnati 2, Ohio.

T. G. Gordon, Regional Mgr., 1202 B&O Bldg., Baltimore 1, Md.

M. F. Wagner, Regional Mgr., Grand Central Station, Harrison & Wells Sts., Chicago 7.

F. H. Lewis, Regional Mgr., 12 Grant St., Pittsburgh 19, Pa.

J. T. Slocomb, Industrial Forester, Green Spring, W. Va.

L. S. Hartley, Mgr. Agricultural, Livestock and Perishable Sales, 607 B&O Bldg., Baltimore 1, Md.

L. J. Miller, Agricultural Agent & Special Representative, 16 East Broad St., Columbus 15, Ohio.

Bangor & Aroostook

H. L. Cousins, Jr., Vice Pres.—Marketing, 84 Harlow St., Bangor, Me.

B. W. Cram, Industrial Agent, 33 State St., Bangor, Me.

Bessemer & Lake Erie—Union

E. J. Smith, Jr., Manager, Industrial Development, Four Gateway Center, P.O. Box 536, Pittsburgh 30, Pa.

Boston & Maine

E. F. Reed, Vice Pres.—Industrial Development, 150 Causeway St., Boston 14, Mass.

Charlestown Waterfront Facilities, same address (land owned by subsidiary in Massachusetts).

Pine Tree Corp., same address (Land owned by subsidiary in Maine).

British Columbia Electric

R. H. Gram, Area Development Manager, B. C. Hydro & Power Authority, 970 Burrard St., Vancouver 13, B. C., Can.

S. B. Peach, Freight Traffic Mgr., same address.

J. D. King, Assistant Mgr.—Industrial Development, same address.

G. E. Bowes, Assistant Mgr.—Area Development, same address.

Canadian National

D. F. Purves, Asst. Vice Pres. — Research & Development (Industrial), 935 Lagauchetiere St., W., Montreal, Que.

G. R. Johnston, General Sales Manager, Freight (for Agriculture), same address.

Industrial officers in each of the five regions of the company in Canada; at Detroit, Mich.; New York, and London, England. Agricultural offices at eight points in Canada.

Canadian Pacific

F. W. Collins, Manager—Department of Industrial Development, 702 Windsor Station, Montreal 3, Que., Can.

Industrial Supervisors at Montreal, Toronto, Winnipeg, Regina, Calgary and Vancouver, and an industrial agent in London, England.

Canton

R. S. Clark, Vice Pres., 300 Water St., Baltimore 3, Md.

Central of Georgia

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Chesapeake & Ohio

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(Continued)

CONTINUED ON PAGE 46

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LOVELAND, LARIMER COUNTY, COLORADO THURSDAY, SEPTEMBER 15, 1960

Plant Manager Addresses Chamber Workshop

Selby Explains Why H-P Firm Chose Loveland

Ten qualifications were drawn up for the site and community that Hewlett-Packard wanted as the location for a new plant, Stan Selby said when he spoke at the Industrial Workshop conducted by the State Chamber of Commerce in Greeley Tuesday.

Selby, who was named as the manager of the new plant, was given the job of selecting a site for the plant.

Paul Rice, a member of the State Chamber industrial committee was also on the Greeley program. He took part in a panel discussion on "Financing Industrial Parks or Districts."

When Selby listed the 10 qualifications for the company plant location, Carroll Wright, Junta, who was in charge of the meeting, asked that he list them again as he noticed that almost everyone of the 63 men in the room was writing them down.

The ten qualifications as listed by Selby were:

1. Reasonable labor costs.
2. Available labor.
3. Convenient transportation.
4. Interested community.
5. Acceptable zoning.
6. Acceptable site location.
7. Reasonably priced property.
8. Climate.
9. Culture availability.
10. Tax structure of community and state.

Selby held up the big folder which was about 2½ feet by 3½ feet—which had been prepared by the Loveland Chamber of Commerce and which was taken to Palo Alto by Bob Hipps and Paul Rice when they made the trip to personally invite the company to come to Loveland. The two men were co-chairmen of the Loveland Chamber of Commerce industrial committee.

Harley Holden was in charge of compiling the folder on Loveland. The large folder contained numerous pictures of Loveland, an airplane view of the industrial park area, letters from city and Chamber officials inviting the company to [illegible], a letter from the [illegible] Hewlett Packard industrial plant build[illegible]

"A little over a year ago, I was assigned the task of locating a site for a new plant," Selby told the Chamber members. "During the 21 years of existence of the Hewlett-Packard Co. it had outgrown an acre site in Palo Alto and it was apparent that it would soon outgrow an additional 30-acre site in the Stanford industrial park. I was instructed to look for a site of 80 acres or more and it should be within the state of [illegible]

"My basis evaluations were made by using data supplied by the U.S. departments of labor and commerce. I also found the magazine, 'Plant Location,' to be very helpful. In it was a page advertisement by the State of Colorado."

[illegible] to evaluate the availability of [illegible] a more d[illegible] when th[illegible] and Chamber of Commer[illegible] in all surrounding papers, asking for applications from women who would be interested in working in an electronics plant if one were established in Loveland, the results meant much to my company.

"Next was convenience of transportation. Most of our material is moved by truck so nearness to good highways was important.

"It was felt that to [illegible] 25 to 100 miles of a ma[illegible] terminal [illegible] desirable. [illegible] from Palo [illegible] by to the new plant with [illegible] taking too much [illegible]

"The reason [illegible] made in the [illegible] from a [illegible] air terminal is easily illustrated. To be within 25 miles of New York [illegible] national airport isn't very [illegible] to be within 100 miles [illegible] Denver isn't too bad. In fact, the Hewlett Packard Co. has a subsidiary corporation [illegible] Boonton Radio, located [illegible] N.J., [illegible] New York [illegible] airport, but the company has to maintain a small aircraft [illegible] transportation [illegible] personnel to and [illegible] International [illegible] because the ground transportation is too slow in that area.

"After valuation of the data available on labor costs, labor [illegible] labor availability and [illegible] transportation facilities, it narrowed [illegible] states that would actually be visited down to Utah and Colorado.

"The following criteria proved to be the real gauge in finally selecting [illegible] community: Acceptable zoning, acceptable site location and reasonably priced property.

"By acceptable zoning, I do not mean lax zoning—quite the contrary. An industrial plant should be in a good location where people would like to work just as a new home should be in the right location.

"I couldn't recommend that my company invest several millions of dollars in an area that didn't have pretty stringent restrictions—it would be a foolish investment without some protection.

"Another criterion that proved to be a problem was in finding a physically acceptable site. We wanted a site with a view—after all, we spend most of our waking hours at work, so let's make it enjoyable. Here again we found a number of communities that had established their industrial area on some waste land. Perhaps for some industries this is all right but for an industry that uses a large number of people — a majority of them women—a nice place to work is very important. The industrial park in Loveland has an excellent view of the plains as well as the mountains."

In a question and answer period, Selby said that his company "had not given Loveland any unusual attention until Bob Hipps and Paul Rice called at their Palo Alto plant and personally invited Hewlett and Packard to come to Loveland and presented this (holding the big stiff backed folder promoting Loveland) folder."

Selby said the fact that so many people in Loveland had contributed to the Industrial Fund, including the school children, [illegible] company was apparently [illegible] believing its own [illegible] because there are [illegible] producers in the [illegible] of them operating [illegible] level of capacity [illegible] become a very difficult [illegible] to squeeze a [illegible]

[illegible] momentum of the [illegible] long-term growth may [illegible] take some of the [illegible] is now clearly [illegible] but this offers [illegible] for what has [illegible] to chemical [illegible] the board.

[illegible] is that they will [illegible] to firm up until the [illegible] routine. Though he still [illegible] Boyle around for the [illegible] when he had to be lifted.

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CONTINUED ON PAGE 48

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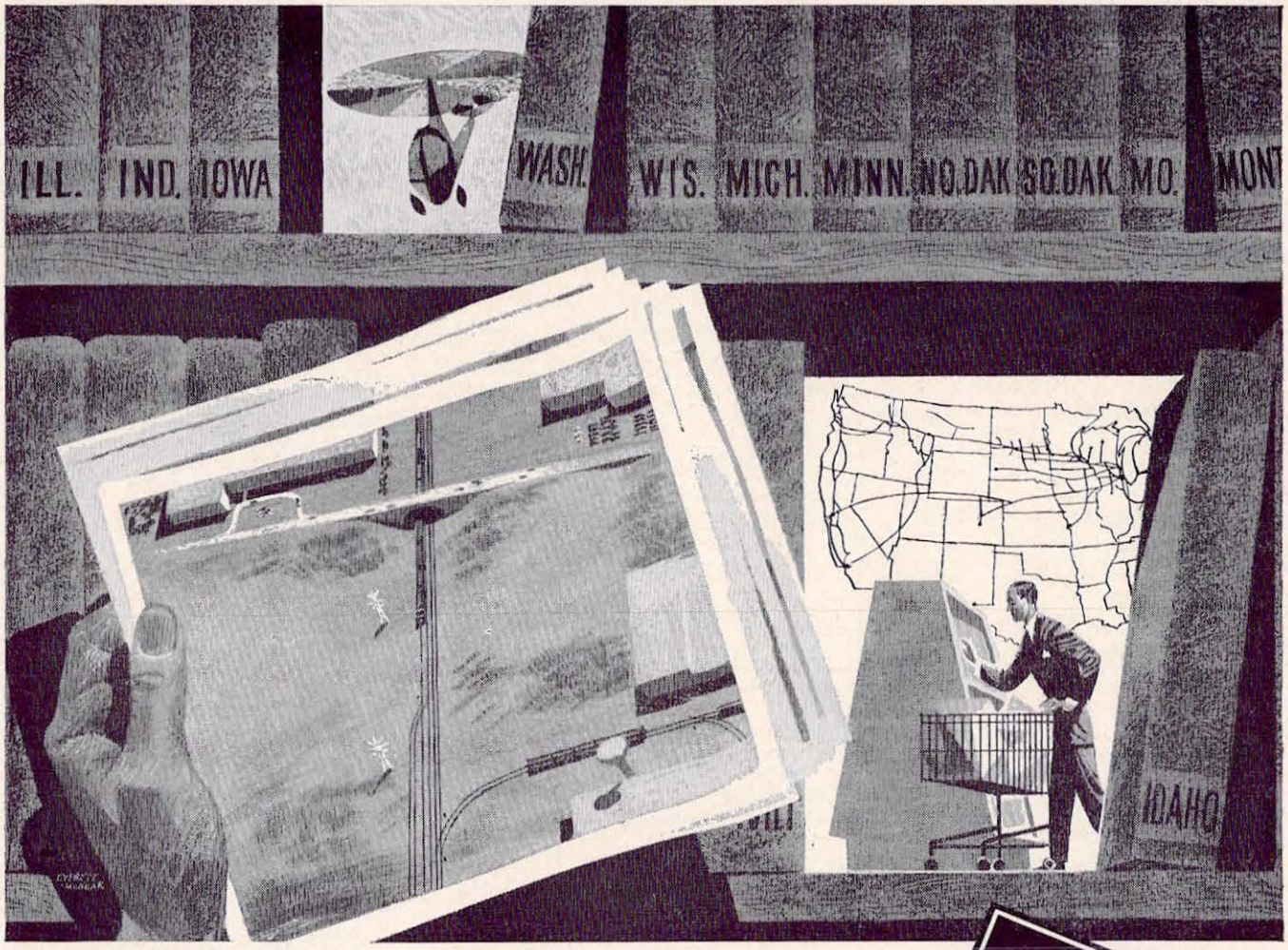

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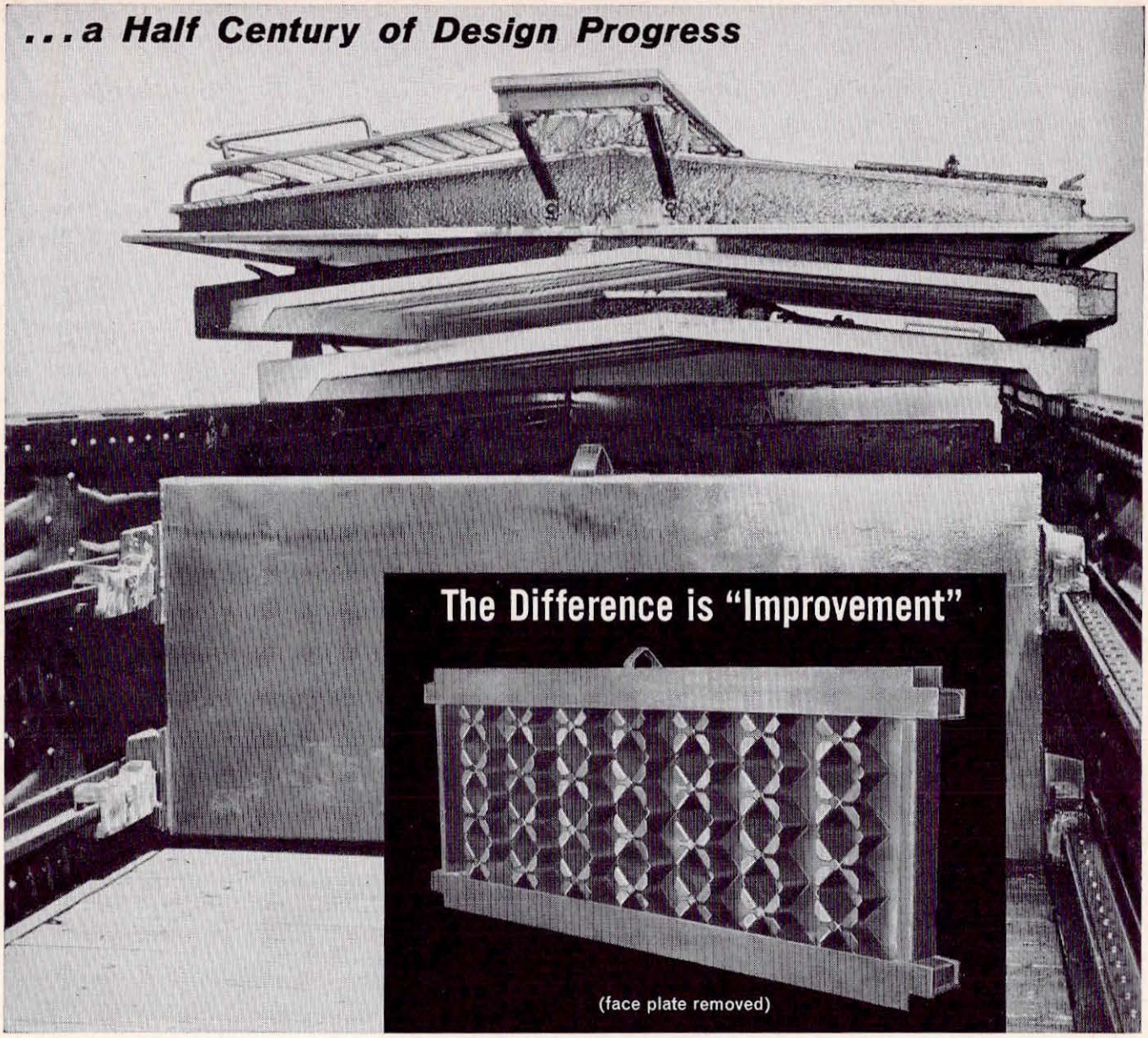

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INDUSTRIAL DEVELOPMENT

(*Continued from page 26*)

Forty railroads feel that development at public expense of highways and toll-free waterways has increased the difficulty of locating plants on rail lines; 25 think it has made no great difference. Some on both sides of that question think piggyback has been and will continue to be a great help to the railroads by allowing them to serve industries which may not be directly on line.

So, as Southern President D. W. Brosnan points out on page 30, would greater freedom to use initiative in rate-making.

As to personalities, industrial traffic managers are becoming increasingly important in selection of new plant or warehouse sites. That was brought out at ARDA's Minneapolis convention by J. P. McElree, assistant to general freight traffic manager of the Santa Fe, when he said: "Industry now often uses 'task forces' to locate new plant sites. More and more, these include the industrial traffic manager. If he is not included, a very important source of help is being overlooked."

Mr. McElree's comment is borne out by railroad development men themselves. Twenty-three of them say the industrial traffic man plays a "fundamental" part in helping his company relocate or expand. Thirty more say the traffic manager's advice, even if not fundamental, is highly important.

What about results?

Wrapping up all the manifold activities, factors, problems and personalities, what results are railroad developers achieving?

The tables on pages 28 and 29 tell the story. They show an estimated 667,539 new carloads, and $165,031,000 of new revenue obtained in 1961; an annual average of 667,000 new carloads and $140,000,000 in new revenue for each of the five years from 1957 through 1961. With allowance for roads which don't keep records or don't want to release them, each of the foregoing figures can probably be approximately doubled. (Figures in the tables, it should be noted, are furnished by the railroads themselves. They are *not* necessarily on a uniform basis, and *should not be used to compare* one road with another.)

With such apparently favorable results, why, then, is railroad traffic as a whole not increasing in proportion? The answer should be obvious. A relocated plant means new traffic for some railroad, but less (or none) for another. An industry's expansion into a new area may give added carloads to the carrier on which it builds a new plant, but may mean a reduction in its *total* transport needs.

Efforts, in short, of I&AD departments can't be measured exclusively by estimated new traffic or revenue. They must also be considered in the light of what their railroads might have lost if the departments were not there and working.

What lies ahead?

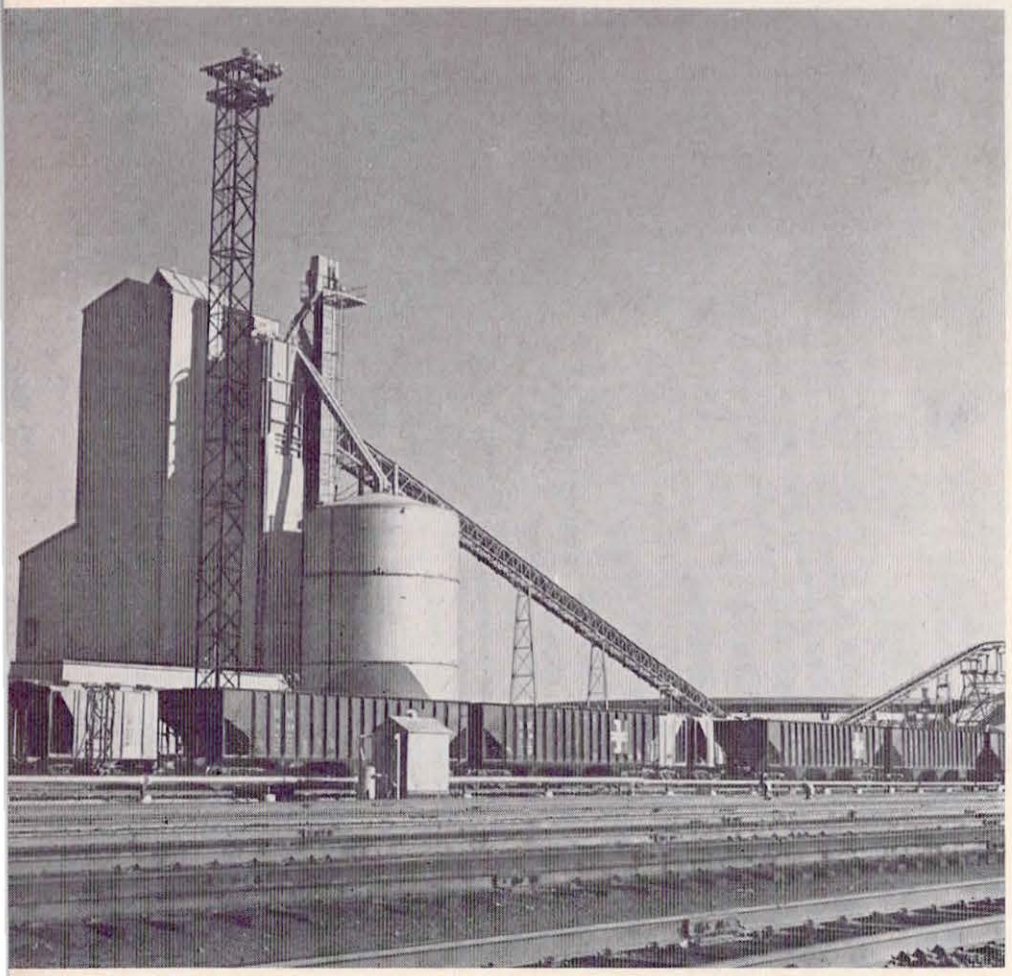
Railroads, says O. W. Pongrace, director of industrial development of the New York Central, "are the professors emeriti of industrial development." They have been at it, on the SP and the IC, since those companies assumed about their present form; on the B&O since 1888; on the Seaboard since before the turn of the century; on the D&H since just after it. As long ago as 1909 the work was well enough recognized and there were enough men engaged in it to justify organization of the now 53-year-old American Railway Development Association, presently headed by K. C. Lewis of the D&H.

It may be, as Mr. Pongrace also says, that railroads are now being "short-hauled by the johnny-come-latelies—the estimated 20,000 separate organizations, groups and government agencies that are now engaged in industrial development."

Assuredly, however, they will continue—and probably intensify as years go by—their efforts to attract new or expanding industry; to improve agriculture, forestry and mining.

And the chances are that, in the new space age, railroad developers will look increasingly to space—the space above yards, tracks, terminals and buildings—as their area of operation. Not every railroad will be fortunate enough to have a Park Avenue, a Boston Garden, or a Prudential "Rock" over its property. But, again referring to pages 28-29, more and more railroads are looking at their potential air rights.

Development of those rights could be the next big step.



Passenger yard that once served Boston's North Station provided site for this cement processing plant that brings new freight to Boston & Maine.

Railroads Step Up Research Pace

► **The Story at a Glance: Recent developments reflect substantial progress toward making railroads research-conscious.**

At an RSMA seminar on systems study (RA, July 9, p. 21) the Battelle Memorial Institute's study of freight transport operations was described, as were other research projects recently undertaken by various roads. At an earlier RSMA meeting a broad proposal for railroad research was presented.

Meanwhile, the AAR's research department, jointly with the Railroad Action Group, has worked out plans with the Santa Fe and Frisco to run a pilot study on automatic car identification.

It is sometimes claimed that railroad research is more talk than action. While this may have been the case in the past, recent developments are pointing to an early change. Although not officially announced, it is known that the Association of American Railroads' Research Committee is working with the Railroad Action Group on automatic car identification (RA Feb. 5 p. 8). This work has progressed to the point where a pilot study has been set up with the participation of the Santa Fe and the Frisco.

In another area, the Southern Pacific and Stanford Research Institute have developed an electronic control for highway crossing protection. The system is said to eliminate the need for special timing sections, and cut-out and restart circuits in approach to a highway crossing where trains of various speeds are involved, as well as trains making station stops. The equipment has reportedly passed the testing stage, and is now about ready for manufacture and sale to railroads.

These, of course, are only two specific problem-and-solution cases. On a broader front is the systems approach to rail problems—the kind described, for example, at a recent Railway Systems and Management Association seminar. One study, carried out by Battelle Memorial Institute for seven railroads (RA, May 14, p. 23) described the development of a mathematical model of freight transport operations on a railroad. The practical effect is that various decisions affecting transport operations, such as heavier loading of cars, or adding cars to a train, can be calculated on a digital computer using the model, thus obtaining overall effects. Decisions affecting railroad operations can be run through a computer before they are actually carried out in real life.

Many matters are not, however, a single line's concern. Aaron J. Gellman, director of planning, North American Car Corp., pointed up the need for cooperative railroad research at a recent RSMA meeting.

"In the inital 10 years following the inauguration of a new, comprehensive research and development program by U.S. railroads, the program should enable these carriers to reduce their cost of producing freight transportation by approximately 10% overall.

"The research program must enable the rail carriers as a group to reverse the present and persistent downward trend in their share of the market for intercity freight transportation (1950—56%; 1960—44%). A reasonable general objective of a broad railroad research program, if inaugurated speedily, would be that after 10 years the railroads should once again be producing about 56% of the intercity freight ton-miles required by the United States economy at that time.

"Another general objective of the comprehensive research pogram is to assure that worthy results of research and development activities will be disseminated throughout the railroad industry to be exploited by the carriers themselves," Mr. Gellman stated.

Concerning specific objectives of the research program, he said: "The research program must give the industry the capability of forecasting well in advance any major technological or competitive threats to its well-being. For example, any research program worth the effort would long ago have awakened the railroad industry to the threat represented by alternative methods of moving coal. In forecasting threats to the railroad industry it will be necessary to incorporate both non-technological and technological research and it's important that close liaison be maintained between the rail carrier marketing organizations, and those responsible for raising the danger signals, and those charged with developing the means for combating the threat.

"With respect to the organization of a cooperative rail carrier research group, I would suggest a target date for its establishment of January 1, 1963. Given this short lead time, it appears necessary that such a group be attached for housekeeping purposes to some existing rail industry organization.

"The railroad research operation should be well insulated from the practices of the past, and the principal executives of the research group must be permitted to use the elements of the existing AAR structure which they find of value to them, but they must not be forced to employ any components that they wish to by-pass. Independence of thought and action are vital to the success of the kind of research activity-contemplated here."

The railroad research oganization, as proposed by Mr. Gellman, would have four offices. "The first of these should be a Research Review Office whose personnel would be engaged in a continuing review of research and development activities in fields outside railroading.

"A Proposals Acceptance Office will be required to review research proposals submitted by individuals or concerns who think they have an idea, discovery or invention of some value to railroads.

"A Research Projects Office must be established to receive recommendations from the Research Review Office, from the Proposals Acceptance Office, and from individual railroads for the establishment of formal projects under the active research program. The Research Projects Office will evaluate competitively all such recommendations, ranking those deemed worthy of pursuit in the order of their importance. Subject to budgetary constraints, this Office will proceed to arrange for the performance of the necessary research work and it will monitor continuously the output of such research to assure that it conforms to the project objectives. The Research Projects Office will also distribute the results of all research undertaken or sponsored," Mr. Gellman stated.

"The final major element in the cooperative rail carriers research organization can be termed the research facility or laboratory. This activity need not be established at once because of present capabilities of independent, contract research organizations which should be sufficient for some time to carry out the projects devised by the Research Projects Office. When a research facility is established within the overall rail research activity, it should be used by the Research Projects Office in the same way the latter uses outside contract research facilities.

As to the cost of such a research program, Mr. Gellman said it might reach $10 million per year, but that the first year's cost should not exceed $1 million.

BONDED-RUBBER motor mounts can be installed in trucks without difficulty.

How MP Extends Motor-Mount Life

Tests by the Missouri Pacific have shown that bonded-rubber nose support mountings for traction motors eliminate problems of damage and excessive maintenance. On both switching and road locomotives, they overcome problems of breakage and wear which the MP has experienced with steel-spring mounts.

The almost universal method of suspending the traction motor in the truck is the so-called axle mounting which gives three points of attachment. Two of these are the suspension bearings clamped around the locomotive axle. The third is the nose suspension, usually some type of flexible arrangement between the motor and the truck frame. Because the motor is free to rotate about the axle on its suspension bearings, it is the function of this nose suspension to accept the torque reaction of the motor.

Improper functioning of the nose-suspension can lead to difficulties and failures in service. Failures most commonly attributable to such improper functioning have been broken nose-suspension lugs on motors, slipped pinions, and an occasional cracked pinion. Shock forces entering the motor through the nose suspension are known to have injurious effects on motor insulation and other components affected by vibration.

For the past four years the MP has been testing elastomeric mountings developed by Lord Manufacturing Co. Results indicate that maintenance costs are reduced. Gear and lug failures are eliminated along with problems of "set" in the steel springs and wear in the plates which form the top and bottom of the support assembly. The road now has a program of replacing steel spring mounts with the Lord units.

Breakage of the suspension lugs on motors, the more serious problem, occurs in heavy-duty switching service. Sudden torque impulses and rebound are typical causes of heavy shock loads. Unless absorbed in the nose support, these impacts will damage the lugs. Steel springs can compress completely, or "bottom," thus transmitting damaging shock loads. In 1961 the MP experienced 18 bottom lug failures on the motors of heavy-duty switchers equipped with steel-spring supports. Damage in each case was $3,000 to $5,000 and, according to MP mechanical officers, could have been more.

There have been no cases of damage involving the bonded-rubber mountings, even though the first such units have been in service since 1957. They are neither too soft, permitting bouncing and gear damage, nor too stiff, giving insufficient cushioning with resultant lug breakage. They have a non-linear deflection characteristic, meaning that solid "bottoming" is impossible.

Wear is the major problem encountered in the nose supports of MP's freight and passenger road units. Speed, combined with heavy loads and extended periods of maximum torque, causes damaging vibration. Vibrations make the steel springs "eat into" the spring holders, causing unwanted "play." Steel springs will also, under such loading, take a permanent "set" which adds further to the play.

Elastomeric mountings provide better control of allowable free motion of the traction motor, lowering costs of truck and motor nose support maintenance. No Lord mounting has ever had to be replaced on an MP locomotive between major motor rebuild periods, even though they may operate for as much as 600,000 miles. This was not true of conventional steel springs.

MP tests have established that elastomeric mountings reduce many problems inherent in steel springs and introduce none of their own. Road service applications materially improve traction motor brush rigging service life and commutation.

The Lord design employs a specially compounded elastomer permanently bonded to steel plates. Initially, MP admits, some mechanical officers were skeptical of the rubber-to-metal bond and its ability to hold under railroad service. Six months of testing convinced them this was no problem; after four years there is no evidence of it.

Alternate solutions for the problem were tested. All had one drawback—there was no way to hold them in the mount. The motor would then bounce excessively with resulting damage.

The one-piece design developed by Lord overcomes this drawback. Bonded construction using multiple steel shims provides excellent stability, high load carrying capacity and easy installation. The elastomer is specially compounded to assure long service life in the railroad environment without degradation of performance. Nor has the MP encountered any interchangeability problem. The one design of elastomeric mounting fits all leading makes of traction motors.

It is reported that several other major roads are presently using the rubber nose support in substantial quantities and other lines are evaluating them.

Editors Afield—The Payroll Pinch

CHICAGO.—The non-op wage increase is making itself felt in signaling and communications departments, which are being told to cut costs by 3 to 10%. Most roads are having to cut signal helpers or construction men. In a few instances (the exceptions) the signal and communications departments will not drop any men, but must make other expense cuts.

Some roads are finding the only way to make ends meet is to lengthen signal maintainers' territories. One signal engineer who is doing this said trucks will be purchased to enable maintainers to cover their longer territories. Although those men not cut off are getting a pay raise, they will have to work harder than before.

Santa Fe is planning to install an automatic train inspection station in approach to a truss bridge. The station will consist of a hot-box detector, dragging equipment detector and shifting load detector. The latter will consist of photocells positioned to focus along the clearance lines so that a shifted load would break the light beam. An information signal will notify train crews that a detector has been actuated. At the stopping point, the crew will be able to read a printed tape which will indicate which car actuated which detector.

Frisco will temporarily delay its microwave installation between St. Louis and Springfield, pending further experience with its new computer system. Present indications are that the road will use punched paper tape or punched card transmission, rather than sending waybill data via facsimile. Later it is planned to install a 1,000-mile microwave system—St. Louis to Springfield and Tulsa; Kansas City to Birmingham.

Signal and communications men are concerned over the small number of engineering graduates being brought into their departments. They feel that not enough is being done to attract these men into the railroad industry. "If ever an industry needed engineering graduates, it is the railroads," one rail officer told me. There should be more aggressive recruiting of engineering graduates; at the present rate the railroads are losing out to other industries.

Railroad communications officers are concerned over American Telephone & Telegraph Co.'s "bargain basement" Telpak rates for bulk communications. Some railroad managements, worried by rising wages, are seriously considering using Telpak in lieu of railroad-owned communications. The principal attraction of Telpak, one communications officer told me, is that its cost is deductible as an operating expense. However, he noted, this expense goes on as long as the service is rendered, which makes it more expensive than "putting in your own communications." Another communications engineer told me that on a system-wide basis, a study on his road revealed that "do it yourself" communication (by purchase or lease from manufacturers) was still more economical than turning over everything to the telephone company. The 30-day cancellation clause with Telpak, while attractive to some, he remarked, can leave you "high and dry" if you've turned over everything to the phone company and then get caught with a rate raise that you can't afford.

Telpak hearings are still in progress before the Federal Communications Commission in Washington. It has been charged that Telpak rates are non-compensatory; it is entirely possible that the Commission might order them raised to levels comparable to AT&T's private line rates or "throw Telpak out" altogether.

Notwithstanding what some have termed the "siren song" presented to management by top telephone company officials, the hard facts often reveal that the railroad's communications department can do a better job, more economically. There is more than just cost to be considered, one man told me, such as the type of service, control, maintenance, and restoration of service after storms or disasters. "Remember," he said, "the communications system should be tailored to the railroad's needs, not tailored to meet the phone company's ability to provide service." In summary, he said that all he or any other railroad communications officer asked for was a chance to fairly present the facts to railroad management before a decision is made concerning use of telephone company facilities.

Years of cost cutting, plus improved technology in electronics, have brought about a "quiet revolution" in signaling and communications. New thinking, new techniques and new equipment are the order of the day. For example, the L&N has ordered a tropospheric scatter microwave system to "pick up" the Georgiana, Ala., CTC control point and bring it into Mobile. Thus, the 118-mile territory controlled by the Georgiana CTC machine will be controlled from a new Traffic Control Center at Mobile, 119 miles south of Georgiana. Instead of using line-of-sight microwave, as presently used by U.S. railroads, the L&N's microwave system will use a "billiard" or "one-bounce" technique. The transmitting station will beam towards the sky (tropospheric layer of the earth's atmosphere ranging from 30,000 to 60,000 ft altitude). The receiving station will pick up the reflected microwave beam. This "one-bounce" system eliminates repeater stations.

In line with the new thinking, I saw several installations of "telephone-type" relays for handling controls and indications, which were formerly handled by gravity-type signal relays. "These telephone-type relays cost less, take up less space and do the job equally well," a signal engineer told me. "Of course, we will maintain safety of operation through our field circuits." It's a case of trying to squeeze more signaling out of each dollar spent.

Solid state or transistorized devices for transmitting controls and indications are receiving considerable attention from signal engineers. Several communications manufacturers are showing interest, and some have announced developments to provide the communications necessary to transmit controls and indications for CTC and remote control interlockings. One informant told me that these communications will in no way negate the safety of operation which now, as in the past, will depend upon conventional field equipment (gravity-type relays, switches, signals, etc.). "The more competition in this area, the better for us," is how one signal and communications engineer expressed it.

—Robert W. McKnight

PEOPLE IN THE NEWS

ATLANTIC COAST LINE.—Robert D. Liggett, assistant chief engineer communication and signaling, promoted to chief engineer communication and signaling, Jacksonville, succeeding **James S. Webb,** retired.

H. J. Stein, assistant chief mechanical officer—engineering, Jacksonville, appointed purchasing agent there, succeeding **L. C. Walsh,** who retired July 31.

BALTIMORE & OHIO.—A. C. Todd, regional manager—industrial development, Cincinnati, Ohio, appointed assistant director—industrial development, Baltimore, Md., succeeding **Stanley A. Temple,** who retired Aug. 1 after 41 years of service. **Walter F. Lockard,** regional representative—industrial development, Pittsburgh, Pa., succeeds Mr. Todd at Cincinnati. **Wayland A. McDowell,** sales representative, succeeds Mr. Lockard.

C. G. Gephart, division sales manager, Springfield, Ill., will head the new and expanded sales office at 1880 East Garfield Ave., Decatur, Ill., retaining the same title. **W. H. Spink** continues as district sales manager there.

Paul C. Garrott, general claim agent, Baltimore, retired July 31 after 49 years with the B&O.

Operations of the Columbus, Ohio, sales office were expanded Aug. 1, making a division point of the former district office there. Sales activities of the Newark and Chillicothe offices are being consolidated with those of the Columbus office, but sales and service staffs will be maintained at Newark and Chillicothe. **Clyde F. Farmer, Jr.,** division sales manager, Newark, will head the Columbus office. **Edward Lind** continues as district sales manager there. **E. C. Schlag** remains division sales manager, Chillicothe, but will now report to Mr. Farmer at Columbus.

Robert D. Liggett
ACL

R. Curtis Clark
E-L

J. A. Craddock
Jersey Central

Edwin O. Schiewe
Milwaukee

Raymond K. Merrill
Milwaukee

Robert S. Hamilton
Southern

Paul P. Martin
Raco

A. Ellis Jones
US&S

BANGOR & AROOSTOOK.—Dr. John T. Metcalf appointed a company physician in Milo, Me.

BURLINGTON.—P. W. Bell named district storekeeper, Havelock, Neb., to replace **W. F. Myers,** who retired July 31.

CANADIAN NATIONAL.—Lawrence MacIsaac, manager of industrial development, Great Lakes region, Toronto, Ont., appointed assistant chief of development, Montreal, Que.

CHICAGO GREAT WESTERN.—B. R. Harris appointed executive vice president, Kansas City, Mo., and **G. L. Schwab** named vice president—traffic, Chicago.

DEFENSE TRAFFIC MANAGEMENT SERVICE.—Col. Edward A. Guilbert, United States Air Force, Washington, D.C., named director of freight traffic, DTMS. **Col. Ronald D. Bagley,** United States Air Force, appointed director of passenger traffic, DTMS.

ERIE-LACKAWANNA.—R. Curtis Clark, assistant treasurer, promoted to treasurer, Cleveland, Ohio, succeeding **Jasper Van Hook,** retired. **George R. Olivier,** assistant to treasurer, succeeds Mr. Clark. **Osmond J. Lowery,** credit manager, promoted to assistant to treasurer.

FRISCO.—Paul R. Moody appointed attorney, St. Louis. He was formerly associated with the firm of Lashly, Lashly & Miller.

Enos Gaines, Jr., trainmaster, St. Louis, appointed terminal trainmaster, Birmingham, Ala., replacing **R. L. Buchanan,** transferred to St. Louis. **G. F. Rischmueller,** assistant division trainmaster, Amory, Miss., named terminal trainmaster, Memphis, Tenn.

GRAND TRUNK WESTERN.—Bernard Post appointed assistant engineer maintenance of way, Battle Creek, Mich., to succeed **A. E. Haywood,** retired.

JERSEY CENTRAL LINES.—J. A. Craddock appointed director of labor relations, Jersey City, N.J. Mr. Craddock was formerly superintendent, Kent division, **Erie-Lackawanna,** Marion, Ohio.

MILWAUKEE.—Edwin O. Schiewe, general solicitor, elected vice president and general counsel, succeeding **Edwin R. Eckersall,** who becomes vice president—special counsel. Mr. Schiewe's successor is **Raymond K. Merrill,** general attorney and commerce counsel.

MISSOURI PACIFIC.—Robert K. Thornton appointed district sales manager, Ft. Worth, Tex., succeeding **Elmer R. Sauerberg,** retired because of ill health. **Joseph C. Hullihan** appointed district sales manager, St. Joseph, Mo., succeeding **G. W. Carleton,** retired.

NEW HAVEN.—W. K. King, superintendent car service, appointed manager specialized operations, succeeding **H. M. Silverstein,** retired. Mr. King's former position abolished and he will continue handling demurrage and punch card data in stations and yards. Home routing and freight car distribution will be transferred from the jurisdiction of Mr. King to that of **B. J. Lawlor,** superintendent freight transportation.

NICKEL PLATE.—Alfred E. Miller, trainmaster, Delphos, Ohio, transferred to the Fort Wayne division at Fort Wayne, Ind. **Edward J. McKean, Jr.,** assistant trainmaster, Norwalk, Ohio, promoted to trainmaster, Toledo division, Clover Leaf district, Delphos. **Claude C. Springer,** extra yardmaster, Bellevue, Ohio, succeeds Mr. McKean.

Arthur LaPointe appointed assistant general passenger agent, Chicago.

ONTARIO NORTHLAND.—A. Jardine, general manager, North Bay, Ont., appointed general manager and chief executive officer. **E. A. Frith,** manager of communications, appointed assistant general manager. **J. W. Millar,** chief mechanical officer, appointed manager of rail services. **K. Passmore,** managing director, Star Transfer Limited, named manager of road transport services. **L. K. Smiley,** plant superintendent, appointed manager of communications. **R. P. C. McLeod,** traffic manager, appointed manager of sales and development. **S. W. Gowan,** secretary and director of finance and accounting, named director of finance and administration and secretary, Ontario Northland Transportation Commission.

H. H. Phillips, general freight and passenger agent, appointed traffic manager. **H. Barr,** assistant general freight and passenger agent, appointed assistant manager of sales and development. **L. J. C. Dunn,** traveling freight and passenger agent, appointed general freight and passenger agent. **W. A. Etches,** supervisor of motive power, appointed chief mechanical officer. **W. H. Hurst,** assistant purchasing agent, promoted to purchasing agent.

ROCK ISLAND.—Lester B. Porter, assistant traffic manager, Detroit, transferred to Pittsburgh. **Richard R. Farrell,** who has been on special assignment in the road's traffic office at Chicago, appointed general agent, Pittsburgh. **Milton P. Tulson,** general agent, St. Paul, transferred to Colorado Springs, Colo., to replace **James C. French,** transferred to Kansas City, Mo. **J. Otis Cathey,** general freight agent, Pittsburgh, transferred to St. Paul, **John E. Tolin, Jr.,** general agent, Memphis, Tenn., transferred to Little Rock, Ark. **Robert R. Penney,** assistant general freight and passenger agent, Little Rock, transferred to Memphis. **Leonard T. Olsen,** assistant land and tax agent, Little Rock, appointed land and tax agent there.

SOUTHERN.—Robert S. Hamilton, vice president—Transportation Research will head the newly created Department of Marketing and Research, Washington, D.C. **S. R. Goodman,** general freight traffic manager, named assistant vice president of the new department. Southern sales activities will continue under

W. Mason King, vice president—sales, Washington. **W. H. Beard,** freight traffic manager, Atlanta, Ga., appointed vice president in charge of sales in Alabama and central Mississippi, at Birmingham, Ala. **F. Clifton Toal,** assistant vice president—rates and divisions, Washington, appointed vice president in charge of sales in Georgia and Florida, at Atlanta, Ga.

W. A. Boltwood, assistant auditor—disbursements, Washington, promoted to auditor of disbursements, succeeding **A. H. Niebauer,** who retired Aug. 1. **R. T. Stinnet** appointed corporate auditor at Washington. Mr. Stinnet, a Certified Public Accountant, was formerly with a public accounting firm. **J. J. Davis** promoted to special accountant.

SOUTHERN PACIFIC.—Max K. Spaulding, special rate assistant, promoted to assistant general freight agent, San Francisco, to succeed **William H. Francis,** advanced to assistant traffic manager, Portland. **Edward Maki,** commerce agent, named assistant general freight agent, San Francisco.

SPOKANE, PORTLAND & SEATTLE.—G. F. Ehlen, traffic manager, Portland, Ore., retired July 31.

Supply Trade

Paul P. Martin, methods engineer—track, **New York Central** system, New York, resigned on June 30 to become assistant to the president, **Railroad Accessories Corp.,** Cresskill, N.J.

A. Ellis Jones has been appointed product manager—railroad radio, **Union Switch & Signal Division of Westinghouse Air Brake Co.** Mr. Jones formerly was manager, railroad sales, Radio division, Bendix Corp. **A. F. Freeland,** formerly associated with Bendix's Radio division, has joined US&S as section engineer—communications. **Jack D. Reid** has been appointed manager, International Marketing—Europe for US&S.

John R. Sinding, Box 323, Wynnewood, Pa., has been appointed eastern sales representative for transportation products sales for **Stran-Steel Corp.** in the New York, Philadelphia, Baltimore area.

Thomas C. Ballou, manager of railway equipment sales, **American Car & Foundry division of ACF Industries, Inc.,** has been appointed St. Louis district sales manager, succeeding **Harold M. Aitkenhead,** named field sales manager for the division.

James H. Vaughan has been appointed to the newly created position of marketing administration manager of the division at New York. Mr. Vaughan will retain his present post of manager of defense product sales in addition to his new duties.

John H. Snyder has been appointed director of purchasing, of the division, succeeding **Phillips B. Hoyt,** retired.

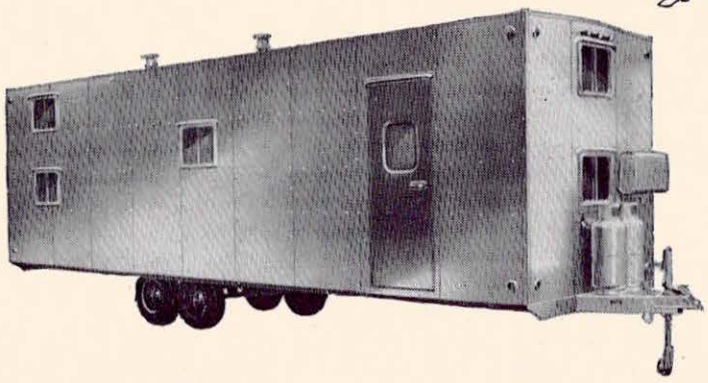
Guy F. Wiles, who retired in Sept. 1961 as superintendent motive power, Eastern region, **Baltimore & Ohio** at Baltimore, has been appointed technical representative for **Stone Filter Co., Inc.,** at Branchville, Md. Mr. Wiles served the B&O for 52 years. He recently returned from Vietnam where he was employed by Transportation Consultants Incorporated as railroad consultant to the Vietnamese government.

Felix Sweeney appointed to the newly created position of eastern sales manager, **American Hoist & Derrick Co.,** with headquarters at East Rutherford, N.J. He will be responsible for sales in the area from

COSTLY COMMUTING?

HIGH HOTEL BILLS?

LOST WORK HOURS?



GET RID OF THEM WITH

CampCars

CampCars put up your work crews by the track side where they give you a full day's work.

No non-productive commuter rides. No sky-high hotel bills. And, CampCar accommodations are plush enough to keep the boys happy, yet economical enough to keep management contented, too.

CampCars will house from 2 to 50 men, are available in many floor plans and — so help us — have proven their ability to pay for themselves in ONE YEAR.

What have you got to lose? Nothing!

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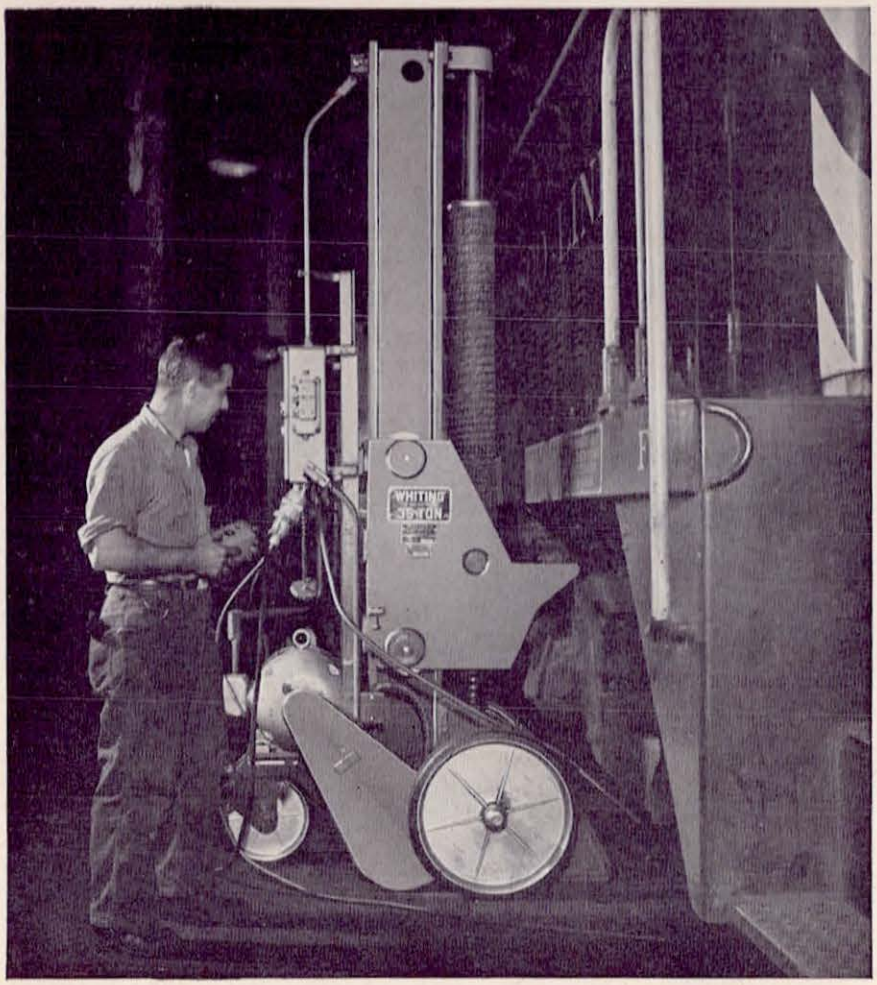
Get the details (with pictures) by writing International Car Division, 835 Englewood Avenue, Buffalo 23, New York.

INTERNATIONAL CAR DIVISION
MORRISON INTERNATIONAL CORP.

WHITING PORTABLE JACKS



FAST, VERSATILE, SAFE!

One man wheels them into position and presses a button, operating either two or four jacks in unison. Powerful electric motors provide simultaneous lift of as much as 4′ 7″ *at the rate of 9″ per minute!*

Whiting Electric Portable Jacks are used throughout the world to speed repairs and service through faster, safer, more versatile lifting, with or without lifting beams. Operating on low-cost electric power, they eliminate cumbersome air hoses. Self-locking worm gears freeze load in case of power failure, and synchronized motor brakes stop all jacks simultaneously when push-button power switch is released.

Whiting offers many products to help keep more stock rolling while actually reducing inventory. They include Transfer Tables, Drop Tables, Ripjacks and Whiting Train Washing Systems, all backed by enviable performance records. Write for complete information.

FREE: Bulletin PJC-403 gives complete details on Whiting Electric Portable Jacks. Write for your copy to: Whiting Corporation, 15603 Lathrop Avenue, Harvey, Illinois.

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WHITING

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RAILROAD EQUIPMENT

Pittsburgh, Pa., to the eastern seaboard, including all of New England.

John B. Dolph has been appointed representative, Westinghouse Air Brake Division, **Westinghouse Air Brake Co.**, New York. **Stanley F. Thayer,** service engineer, New York, has been appointed district engineer there.

Russell P. Stimely has been appointed sales manager, all trades, **Minnesota Mining & Manufacturing Co.**, Seattle, Wash., succeeding **Willis C. Rech, Jr.,** named sales manager, industrial and automotive trades, St. Louis, Mo., branch.

W. J. Lenahan, formerly of the Syracuse, N.Y., office of the **Okonite Co.,** has been transferred to Boston, Mass., as assistant district manager. Mr. Lenahan will be replaced by **R. J. Wynne,** formerly with the New York district office. **P. B. Lavelle,** formerly of the Boston office, has been named district manager of a new office in Indianapolis, Ind., at 1609 Oliver Avenue. **R. F. Fahringer,** assistant manager, special products, Passaic, N.J., has joined the New York district office. **Thomas A. Kommers** has been named manager of the Portland, Ore., office. **Richard L. Rahn** will handle sales in the San Francisco district.

Geoffrey A. Overton has been appointed manager—special projects, **Union Switch & Signal Division of Westinghouse Air Brake Co.,** reporting directly to the vice president and general manager.

Dillard Paper Co., Greensboro, N.C., has been appointed southeastern distributor for "Avi-Gard" barrier material, the new Kraft linerboard and "Avistrap" product manufactured by **Franklin Container Corp.,** Philadelphia, Pa.

OBITUARY

James J. Higgins, 59, district sales manager, **Transportation Equipment Division, American Steel Foundries, Inc.,** Cleveland, died July 4.

John J. Metzger, 46, Southwest District representative for **The P. & M. Company** and the **Rail Joint Company,** division of **Poor & Company,** at St. Louis, died July 12 at Fort Worth, Tex.

William C. McCosh, 44, director of marketing, **National Carbon Co.,** division of **Union Carbide Corp.,** died suddenly July 25.

A. T. Miller, who retired in 1956 as general superintendent, **Atlanta & West Point,** and as secretary, **Southern and Southwestern Railway Club,** at Atlanta, Ga., died June 6 in Texas.

Dividends Declared

DENVER & RIO GRANDE WESTERN.—25¢, quarterly, payable Sept. 17 to holders of record Sept. 4.

NEW YORK, CHICAGO & ST. LOUIS.—50¢, quarterly, payable Oct. 1 to holders of record Aug. 31.

NORTH CAROLINA.—7% guaranteed, $3.50, semiannual, paid Aug. 1 to holders of record July 20.

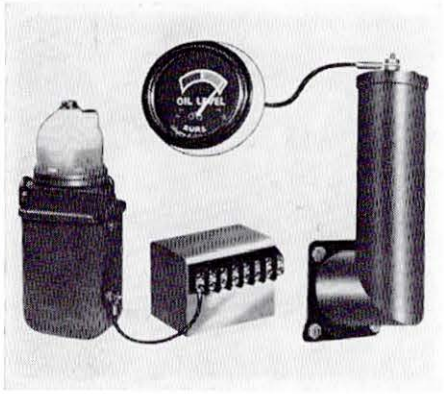
NORTHERN OF NEW HAMPSHIRE.—$1.50, quarterly, paid July 31 to holders of record July 16.

SARATOGA & SCHENECTADY.—$3, paid July 16 to holders of record July 2.

SOUTHERN.—70¢, quarterly, payable Sept. 14 to holders of record Aug. 15.

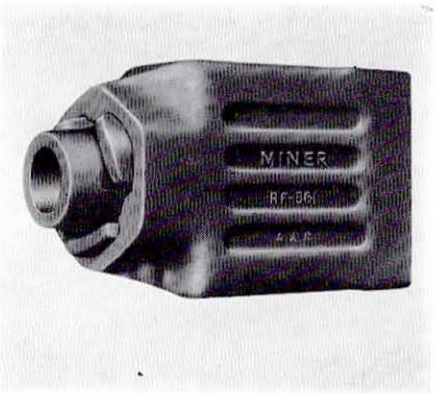
WESTERN PACIFIC.—25¢, quarterly, payable Aug. 15 to holders of record Aug. 1.

NEW PRODUCTS REPORT



Oil Level Gauge (RA-1)

The Sure Oil level gauge is a direct-reading gauge which installs without engine changes, other than minor drilling and wiring, at a low position on any crankcase or reservoir of any size. The meter is activated by any low voltage source. The Sure automatic oil refiller is a companion unit, but useable separately. It keeps oil up to proper level while engine is running regardless of possible leakage or abnormal consumption. *Sure Gauge & Lock Co.*



Draft Gear (RA-2)

Revised metallurgy and a metallic lubrication system are said to add sturdiness to the Miner RF-361 rubber friction draft gear for 24-5/8-in. pocket. As tested under specification M-901E-59, the gear has an official capacity of 41,400 ft-lb at rating travel. After AAR sturdiness test, it had an official capacity of 53,800 ft-lb at rating travel and 61,700 ft-lb at maximum travel. AAR Certificate No. 43 has been issued. *W. H. Miner, Inc.*

Spray Booth Liner (RA-3)

A fire resistant plastic type coated sheeting, Resista-Cote, is cemented to spray booth walls to form a tough, permanent lining that resists adherence of paints, adhesives, or common spray coatings. Over-spray can be blotted off with paper while still wet, or peeled off when dry thickness indicates removal is necessary. The material can also be used for making reusable stencils for lettering and identification. *Demp-Nock Co.*

Cut-Off Machine (RA-4)

The 20-in. angle abrasive cut-off machine is an all purpose, heavy-duty cutter offering a great variety of cutting applications. This model has a pivot built into the base, and the head swivels in a 60-degree arc to cut any angle from 30 to 90 degrees. Standard equipment includes a 10-hp motor mounted on an adjustable plate and magnetic starter control with overload protection. Wheel speed is 2,280 rpm. *Oster Manufacturing Co.*

Mercury Lamps (RA-5)

A metallic reflector is built into the bulbs of the Kleen-Beam line of beam-controlled mercury vapor lamps now available in 400-watt R60-bulb and 1,000-watt R80-bulb sizes. The lamps are said to have a useful life of 12,000 to 15,000 hr compared to 750 hr for a standard inside frost incandescent lamp. Useful light is projected out of front of bulb; no external reflector is required; fixture construction is simplified. *Westinghouse Electric Corp.*

Spray Painting Unit (RA-6)

The new Polaris heavy-duty airless spray painting unit handles practically any industrial finish, including lacquers, enamels, vinyls, alkyds and epoxies. It will deliver 1-gallon per min. on a continous basis. Stainless-steel parts include air motor shaft, piston, fluid piston rod and cylinder. Polaris is available in a 10-gallon portable unit and a 55-gallon unit designed for use with original open-top drums. *Binks Manufacturing Co.*

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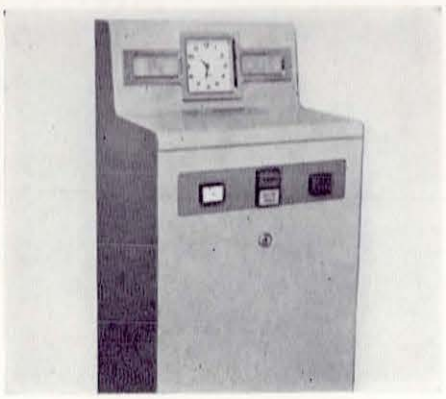
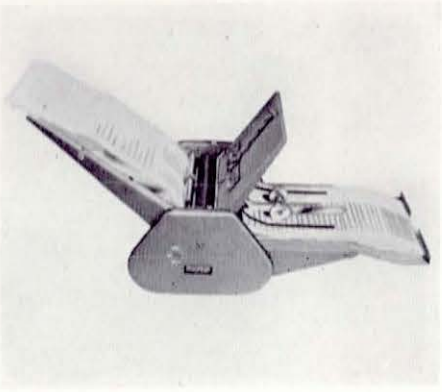


Attendance Recorder (RA-7)

The Record-A-Matic attendance recording system is a method of printing and punching, in one operation, a complete week's time for each employee, on a single 80-column IBM card. The card then becomes a document containing the necessary information in both printed and punched form to determine the lapsed time for a weekly payroll operation. Record-A-Matic prints time on a 24-hr basis for a full seven-day work week. *American Data Machines, Inc.*



Folding Machine (RA-8)

The new, portable FASTFOLD handles up to 500 letters in 2½ minutes at full speed. Feeding and delivery (stacking) mechanisms on the FASTFOLD work automatically and continuously to give non-stop operation. Two quick-set controls permit selection of a single or double fold, or any of eight standard folds, as well as a wide range of non-standard folds. The compact table model is easily adjustable for non-standard paper lengths. *Michael Lith Sales Corp.*

New Literature

THE ABC's OF HOSE LINE REPLACEMENT. This new, handy Aeroquip Corp. how-to-do-it folder is designed to make it easy for a maintenance man or equipment operator to identify and assemble Aeroquip high pressure, medium pressure and low pressure hose and fittings. (NL-1)

METAL PACKINGS. A 24-page illustrated brochure on metal packings has been released by Garlock, Inc. Prominently featured is Garlock's new non-lubricated rod packing with liquid-cooled packing case and filled Teflon rings for non-lubricated packing service. (NL-2)

ALUMINUM MANUAL. All-State Welding Alloys Co. announces a comprehensive, 40-page illustrated manual of aluminum joining covering inert-gas welding, arc-welding, brazing and soldering methods. (NL-3)

ELECTRIC-POWERED INDUSTRIAL TRUCKS. A new condensed catalog showing the entire line of Elpar electric-powered industrial trucks has been published by the Elwell-Parker Electric Co. The 16-page, 3-color catalog contains application data as well as full specifications on every truck in the Elpar line. (NL-4)

BUCKETS FOR CONSTRUCTION AND INDUSTRY. A 6-page, 2-color bulletin (No. 35-62), describes and illustrates in detail Erie Strayer's 2-line clamshell buckets for rehandling and digging, electrical and mechanical hook-ons as well as 3- and 4-line models for special applications. (NL-5)

POROUS-KROME/VANDERLOY/CHROME PLATED CRANKSHAFTS. Describes application of the Porus-Krome and Vanderloy processes which contribute to increased piston ring life, increased cylinder life, reduction in lube oil consumption, reduced engine and compressor downtime, and eliminate stocking of oversized pistons and piston rings. Published by the Van der Horst Corp. (NL-6)

EFFICIENCY AND SAFETY DEVICES. This illustrated Nolan Co. catalog describes a wide range of efficiency and safety devices for use wherever rail facilities are employed, whether for industrial siding or large commercial roads. (NL-7)

TECHNICAL BULLETIN 47. Covers characteristics and typical data for Sun Oil Co.'s moderate-priced, sodium soap greases for use on plain and anti-friction bearings at temperatures up to 250 deg F. (NL-8)

FORGED FITTINGS. A new, 36-page catalog with complete data on more than 10,000 types and sizes of Crosby-Laughlin (division of American Hoist & Derrick Co.) forged fittings for wire rope and chain. (NL-9)

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Market Outlook

Carloadings Rise 1.6% Above Previous Week's

Loadings of revenue freight in the week ended July 28 totaled 567,131 cars, the Association of American Railroads announced on Aug. 2. This was an increase of 8,885 cars, or 1.6%, compared with the previous week; a decrease of 24,170 cars, or 4.1%, compared with the corresponding week last year; and a decrease of 46,857 cars, or 7.6%, compared with the equivalent 1960 week.

REVENUE FREIGHT CARLOADINGS

For the week ended Saturday, July 28

District	1962	1961	1960
Eastern	81,482	82,761	88,746
Allegheny	93,280	99,659	99,030
Pocahontas	49,744	51,769	53,616
Southern	105,359	106,063	105,172
Northwestern	88,097	95,526	102,884
Central Western	111,431	116,508	122,922
Southwestern	37,738	39,015	41,618
Total Western Districts	237,266	251,049	267,424
Total All Roads	567,131	591,301	613,988
Commodities:			
Grain and grain products	53,040	67,168	71,076
Livestock	2,369	2,726	3,301
Coal	103,682	105,404	104,905
Coke	5,397	6,236	5,689
Forest Products	39,435	40,191	39,549
Ore	54,408	56,794	63,254
Merchandise l.c.l.	21,849	27,602	34,162
Miscellaneous	286,951	285,180	292,052
July 28	567,131	591,301	613,988
July 21	558,246	584,137	619,818
July 14	497,660	573,306	606,814
July 7	419,584	424,192	457,779
June 30	589,656	534,347	547,893
Cumulative total, 30 weeks	16,415,668	15,766,608	17,988,189

PIGGYBACK CARLOADINGS.—U. S. piggyback loadings for the week ended July 21 totaled 13,177 cars, compared with 10,788 for the corresponding 1961 week. Loadings for 1962 up to July 21 totaled 382,360 cars, compared with 316,754 for the corresponding period of 1961.

IN CANADA.—Carloadings for the seven-day period ended July 14 totaled 75,801 cars, compared with 67,467 for the previous seven-day period, according to the Dominion Bureau of Statistics.

	Revenue Cars Loaded	Total Cars Rec'd from Connections
Totals for Canada		
July 14, 1962	75,801	24,418
July 14, 1961	74,284	20,453
Cumulative Totals		
July 14, 1962	1,833,256	663,120
July 14, 1961	1,792,922	667,413

New Equipment

FREIGHT-TRAIN CARS

► *Canadian National.*—Ordered 150 89-ft tri-level flat cars from National Steel Car for October delivery. The 70-ton, open-sided rack cars, first of their type purchased by CN, will be used for the transportation of automobiles.

► *Chicago & North Western.*—1962 car repair program covers more than 5,000 units, including 2,800 box cars which will be upgraded to Class A condition and 1,800 gondolas which will be equipped with steel flooring. Program, to be handled at Clinton, Iowa, car shop, calls for rebuilding or repair of 2,036 more cars than originally planned for 1962.

► *Genessee & Wyoming.*—Is acquiring 50 70-ton, 2,300 cu ft hopper cars equipped with MacGregor roll-a-way roofs (RA, July 3, 1961, p. 18) for rock salt service and 100 40-ft box cars; all are to be rebuilt from existing equipment by Greenville Steel Car, with deliveries starting in September. The hoppers mark the first major installation of the MacGregor roof in the U.S.; more than 4,000 cars are equipped with them in Europe.

SPECIAL

► *Louisville & Nashville.*—Authorized expenditure of $74,500 for purchase of 27 half-ton trucks with special equipment for use by communications and signal department.

► *Wabash.*—Wabash subsidiary, Wabash Motor Transit Co., will buy 20 bi-level racks for installation on flat cars to haul farm tractors and other agricultural implements.

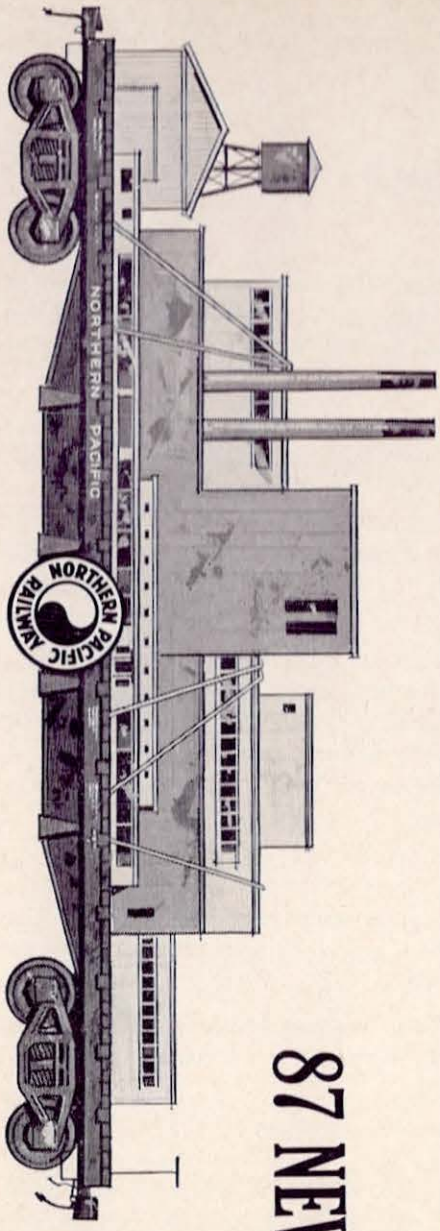
FOREIGN

► *Pakistan.*—Will purchase $31 million of U.S. railroad equipment under a loan authorization by the U.S. Agency for International Development (AID). The money will be used to acquire locomotives, materials for baggage coaches and freight cars, rails and construction materials for bridges and other engineering works.

Capital Expenditures

► *Norfolk & Western.*—A $10,000,000 equipment acquisition program, to be financed by issuance of equipment-trust certificates, reportedly includes 26 2,250-hp GP-30 diesel-electric locomotives from EMD; 200 70-ton, 50-ft cushion underframe box cars from Pullman-Standard; and 50 100-ton aluminum covered hopper cars from Magor.

► *Southern.*—Plans to acquire new equipment valued at $23,625,000, according to an ICC order authorizing the issuance of $9,450,000 of equipment-trust certificates as the first installment of Philadelphia Plan financing. Acquisition program reportedly includes 60 2,250-hp GP-30 locomotives from EMD; 50 auto-parts box cars from Pullman-Standard; 200 aluminum covered hopper cars from Magor; 48 bulkhead chain-equipped flat cars from Thrall; 30 cushion underframe flat cars from Pullman-Standard; and 100 covered hopper cars, open to competitive bidding.



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PRR Fixes Blame In Fatal Wreck

A Pennsylvania "baseball special" wreck that killed 19 persons and injured 100 near Harrisburg, Pa., July 28 was blamed last week on a maintenance gang's failure to comply with "time-tested [track work] specifications and practices."

James P. Newell, PRR's vice president—operations, emphasized that "deferred maintenance was in no way involved in this accident."

He said the wreck occurred "due to track being out of alignment." He blamed this, in turn, on a maintenance gang's failure to apply a sufficient number of rail anchors to a section of track under rehabilitation. He said "appropriate disciplinary action" will be taken.

The ICC has set Aug. 20 for the beginning of its formal investigation of the derailment.

Three of eight coaches in the Philadelphia-bound "baseball special" left the tracks and plunged down an embankment into the Susquehanna River about five minutes after leaving Harrisburg. Another coach and a bar car were derailed but remained upright.

The Pennsylvania moved swiftly to search out and pinpoint the cause of the tragedy. On July 29 Mr. Newell issued a brief statement saying that the derailment "was apparently the result of track being out of alignment." On Aug. 1 he issued the following amplifying statement:

"On the basis of facts developed, we have concluded that the tragic wreck of the baseball special near Harrisburg was due to track being out of alignment and that this lateral deflection of the track occurred sometime within the hour and 15 minutes following the passage of the previous train. This deflection resulted from failure of maintenance forces to comply with time-tested specifications and practices of long standing governing track work on the Pennsylvania Railroad during summer temperatures.

"Three and 3/10 miles of track in the area in which the wreck occurred was being rehabilitated—that is, worn crossties were being replaced, new ballast installed and track brought to grade. These are regular maintenance procedures which are performed on a periodic basis.

"A mechanized maintenance gang consisting of a general foreman, three foremen, and 45 machine operators and track men, with necessary machinery, was assigned to this work. At the close of work on Friday afternoon prior to the accident, the track was considered by the supervision in charge to be in proper condition for the safe movement of trains.

"Our investigation, however, developed that in the area where the wreck occurred an insufficient number of rail anchors had been applied to prevent undue longitudinal movement of the rail. This movement can be caused by expansion of the rail due to a sharp rise in temperature during the day. It can also be caused by the movement of trains over the track. The lack of anchors permitted movement of the rails to a point where the accumulated forces resulted in a lateral deflection of the track.

"Appropriate disciplinary action will be taken with the supervision primarily responsible for the failure of this maintenance gang to observe specifications and practices.

"Deferred maintenance was in no way involved in this accident. Our track and roadbed are constantly inspected, and they are properly maintenanced for the speed at which trains are authorized to operate. At locations where it is necessary to defer maintenance, proper prior action is taken to insure safety of operations.

"All of us with the railroad feel most profound sorrow over this tragic accident. Again, may I express our heartfelt sympathy to those injured and to the relatives and friends of those who lost their lives. Our officers and employees have done and will continue to do everything humanly possible to assist them."

Southern Creates Marketing Unit

Recognition of the importance of marketing techniques in meeting expanding competition has led to the creation of a new Department of Marketing and Research by the Southern Railway System. The new department, which was created effective Aug. 1, has headquarters in Washington, D.C.

Heading the new department are

Robert S. Hamilton, vice president, and S. R. Goodman, assistant vice president. Mr. Hamilton was formerly Southern's vice president—transportation research. Mr. Goodman was formerly general freight traffic manager.

Southern's sales activities will continue to be under the direction of W. Mason King, vice president—sales, with headquarters remaining in Washington, the railway said.

In announcing the creation of the new department, Southern President D. W. Brosnan described the move as another step in the railway's program to streamline and improve its services and increase its usefulness to customers. The new department will use modern marketing and pricing procedures, Mr. Brosnan said, to locate new markets for the railway's services and to expand existing markets through realistic pricing geared to the development of services and equipment tailored to lower the customers' over-all transportation cost. Primary emphasis will be on meeting the competition of the private, unregulated truck which now handles an estimated 60% to 70% of all intercity freight traffic, Mr. Brosnan said.

66,200 Trailers For TOFC, 1963-67

Growth of railroad piggyback service has made railroads "the most important single customer of the trailer industry," and will require construction of an estimated 66,200 trailers within the next five years, according to Palmer Bayer, vice president and general manager of REA Leasing Corp.

Mr. Bayer's predictions, made to the Truck-Trailer Manufacturers' Association at its 14th annual summer meeting, were based on the "conservative" assumption that TOFC traffic would grow at a rate of 25% per year, compounded, between 1963 and 1967. This, applied to the "assumed present fleet" of some 25,000 piggyback trailers, would call for 6,250 new units in 1963, 7,800 in 1964, 9,700 in 1965, 12,200 in 1966 and 15,250 in 1967. In the same five years, he added, another 15,000 trailers would be needed to replace 60% of the existing fleet.

As a basis for his predictions, Mr. Bayer pointed out that piggyback, thus far in 1962, is growing "almost three times as rapidly as freight carload business."

The REALCo executive also outlined to the trailer manufacturers some of the differences between trailers built only for highway service and those built for rail service.

N&W Offers to Buy Atlantic & Danville

The struggles of the bankrupt Atlantic & Danville may soon be over. Norfolk & Western disclosed Aug. 2 that it has agreed to bid $1,500,000 for cash purchase of the A&D and to operate the 207-mile line between Norfolk and Danville, Va., if it acquires ownership. The A&D connects with N&W's main line at Norfolk and Suffolk, Va., and with the N&W's Lynchburg, Va.-Durham, N.C. line at Dennis-ton, Va.

N&W's offer was contained in an agreement signed by S. T. Saunders, president of N&W, and S. J. Flournoy, sole A&D trustee, and approved by the U.S. District Court for Eastern Virginia. The court set a public hearing in Norfolk Aug. 17 for a decree which will direct sale of A&D property at public auction. If its cash offer is accepted at this sale, N&W will apply to the ICC promptly for approval of purchase and authority to operate the road.

N&W now owns more than 45% of A&D outstanding first mortgage bonds.

In a statement announcing the move to acquire A&D, N&W said it would spend "the money necessary" for insuring the safe and efficient operation of the line.

Incorporated under Virginia laws on Aug. 2, 1894, the A&D was operated by the Southern under a 50-year lease which expired in 1949. It reverted to independent operation on Aug. 1, 1949. A&D filed a bankruptcy petition in U.S. District Court on Jan. 19, 1960, following the ICC's refusal to authorize federal-government guaranty of an $800,000 loan (RA, Jan. 18, 1960, p. 7). The ICC turned down the application on the ground that A&D earning prospects offered no assurance that the loan would be repaid. During 1960 A&D operations resulted in a net loss of $237,519.24.

Rail Rapid Transit Called Indispensable

"Millions of Americans living in metropolitan areas need new freedom in their bill of rights—freedom to choose the best transportation to suit their travel needs," Philadelphia City Solicitor David Berger told the Commonwealth Club of San Francisco Aug. 2.

Mr. Berger, who played a central role in Philadelphia's successful effort to revitalize that city's railroad commuter lines, addressed an audience that included civic, industrial and business leaders concerned with the $800-million Bay Area Rapid Transit program.

He called for "balanced transportation networks for the cities, with high-speed rail as part of the indispensable backbone. . . . Modern high-speed rail alone can move masses of commuters efficiently and speedily into and out of the downtown heart."

Mr. Berger said $9.8 billion will be needed during the next decade to put public transportation in 26 key cities on a sound basis. This is "cheap," he said, when compared with the taxes which otherwise will be needed for more "disastrously inefficient superhighways," losses from further destruction of tax-ratable real estate, and a continuously mounting automobile accident rate. He noted that a new U.S. House Banking and Currency Committee report estimates that traffic jams now cost the country $5 billion a year.

Philadelphia's own "back to the rails" program—in which the city helps meet the additional cost of frequent-service, reduced-fare commuter trains—has increased ridership by 44% on six of 12 existing railroad commuter routes, Mr. Berger said. He said the program will be extended to three additional routes this fall.

23.5% Rise Seen In Capital Spending

ICC estimates now put railroad capital expenditures during 1962 at $798.5 million—a 23.5% increase over 1961's actual expenditures. Earlier, the ICC had estimated this year's capital expenditures would total $771.8 million, a 20% increase over 1961 (RA, April 30, p. 9).

The ICC projection is based on estimates received quarterly from 102 Class I roads.

These carriers now estimate that equipment expenditures this year will be 26% higher than in 1961; road expenditures are estimated at 18.7% above last year. The 1962 expenditures for equipment are expected to account for 67.4% of total capital spending as compared with 66.1% in 1961.

For this year's first quarter, actual capital expenditures for additions and betterments aggregated $146.1 million, a decrease of 11.6% from 1961. But expenditures estimated at $652.4 million for the last three quarters are expected to bring the year's total to $798.5 million.

During this year's first quarter, expenditures for road and equipment were 5.6% and 13.8% lower, respectively, than for the 1961 quarter.

Shippers and Coalmen Back Rate

► The Story at a Glance: House Interstate and Foreign Commerce Committee hearings on two of the key bills in the Kennedy Administration transport program—H.R. 11583 and H.R. 11854—are scheduled to resume Aug. 7. Before the temporary suspension of hearings July 27, representatives of the National Industrial Traffic League and the National Coal Policy Conference added their support to earlier testimony by spokesmen for the railroads and the rail supply industry favoring the bills.

Members of the National Industrial Traffic League are overwhelmingly in favor of the basic objective of H.R. 11583 (and its companion Senate bill, S. 3243) to exempt railroads from minimum rate regulation on bulk commodities and agricultural and fishery products, provided the orderly rate procedures under Section 5a of the Interstate Commerce Act are fully preserved and the carriers are protected against anti-trust harassments. That was the testimony of NITL President Richard M. Boyd before the House Committee on Interstate and Foreign Commerce.

Mr. Boyd's testimony was based on response of League members to a circular in which League officers polled League membership "in order to have an accurate picture of whether the nation's shippers favor the exemption of certain carriers from minimum rate regulation in the transportation of bulk commodities, agricultural and fishery products and passengers."

League members were asked, Mr. Boyd said, to "indicate whether they favored or did not favor the authorization of League support of the basic object of H.R. 11583 provided the orderly rate procedures under Section 5a are fully preserved.

"An overwhelming majority of the League membership voted to support the basic object of H.R. 11583," Mr. Boyd said. "A minority opposed such support for various reasons, prominent among which are: concern with the possible effect on the price structure for certain commodities and the fact that in some instances, commodities in bulk would be exempt from minimum rate prescription while the same commodities while packaged would be subject to minimum rate control by the Commission."

The position of the League membership is clear, Mr. Boyd said. "A majority of League membership supports the idea of greater freedom and responsibility of carrier management with more discretion in establishing and maintaining rates under which traffic will move freely and produce revenues necessary to adequate service.

"The League membership, in voting to support the basic object of H.R. 11583, included a proviso that the orderly rate procedures under Section 5a be fully preserved and, unless the bill is amended to delete the restriction against conference rate making, we cannot support the proposed legislation.

"The conference method of rate making which has been followed by the carriers under the provisions of Section 5a has served both the shipping public and the carriers well, and it is desirable that all rates be established by this method. The orderly procedure of docketing and advertising proposals is important in that it gives all concerned an opportunity to comment on pro-

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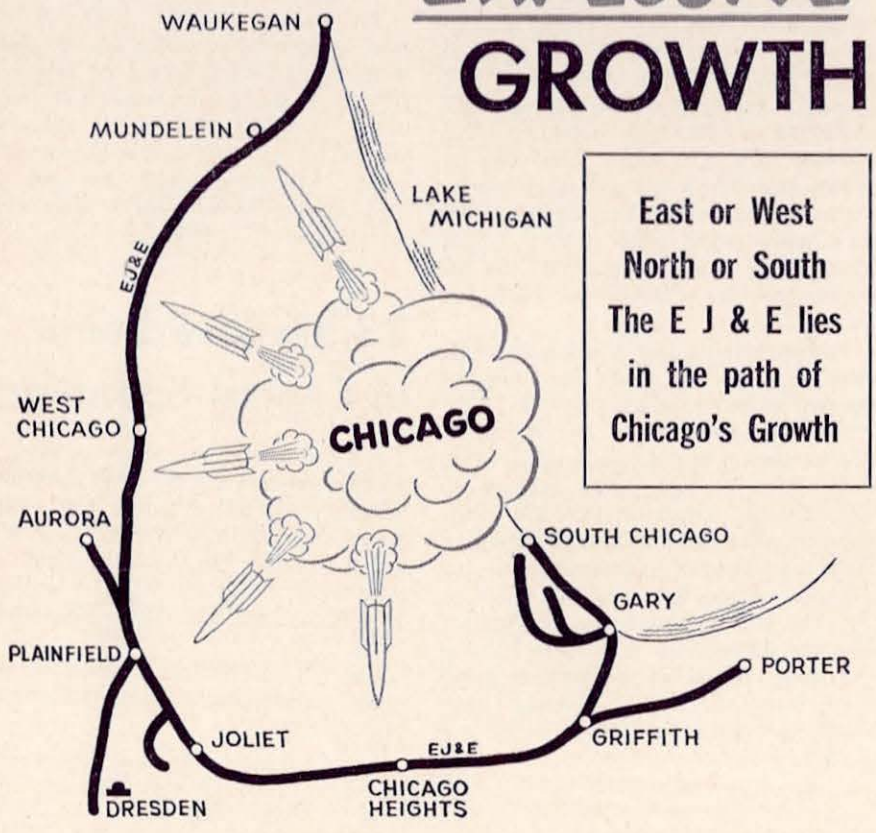

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"The pending bill attempts to distinguish between joint and single line rates by exempting joint actions of the carriers in establishing joint rates on reasonable through routes from the anti-trust laws while making those laws applicable to the procedures followed in establishing single line rates.

"To shippers, this is a highly artificial distinction. Changes in single line rates and in joint rates are of equal importance and have an equal impact on traffic and competition between shippers. For example, the Santa Fe has a single line running from Chicago to California. A shipper in Chicago using this carrier would pay a single line rate. However a shipper of the same product in Rockford, Illinois, would have to ship over more than one line to reach California and would have to pay a through joint rate. Both shippers are vitally interested in both their own rates and their competitor's rate. A change in either rate could have a serious competitive effect on both shippers in their California markets. This competitive effect would be the same regardless of whether the change was in the joint rate or in the single line rate.

"In both cases, the shippers need the advance notice and the opportunity to be heard on rate changes which are available under the present conference method of rate making. These orderly procedures for rate making have been completely satisfactory to the shippers and it is their opinion that all rates should continue to go through these orderly procedures. . . .

"The League strongly supports the orderly rate procedures provided for under Section 5a of the Act and urges that the Congress not restrict the application of Section 5a from rates established under the proposed exemption as embodied in this bill."

The League also supports the change in Section 303(b) of the Act under which the three-commodity or mixing rule would be eliminated, Mr. Boyd said. Mr. Boyd also commented on several sections of H.R. 11584, basing his comments on long-standing League policies favoring experiments by common carriers in rate classification and documentation systems, the right to ship vehicles or containers on carriers of other modes without price discrimination, establishment of through service and joint rates, and others.

Also testifying on July 27, Joseph E. Moody, president of the National Coal Policy Conference, strongly backed President Kennedy's proposal for granting railroads freedom from ICC control in setting minimum bulk commodity rates.

Both the railroad and the coal industries have done a remarkable job in the last 10 years of lowering the cost of delivered coal, Mr. Moody said, but both industries are still plagued by "the unfair competition from foreign residual oil and dumped natural gas—sold on interruptible contracts."

The National Coal Policy Conference is convinced, Mr. Moody said, "that removing railroads from ICC control in respect to setting minimum bulk commodity rates would provide a most important degree of flexibility to assist the coal producers in meeting unfair competition of predatory pricing by foreign oil and dumped natural gas.

"This, in turn, could mean a substantial revenue boost for the coal carrying railroads, which transport about 75% of all U.S. coal."

Although strongly recommending passage of the bill, Mr. Moody suggested that it be amended to eliminate the requirement that all railroad rates must be published for 30 days before becoming effective, and which would make them subject to suspension by the Interstate Commerce Commission.

"I am told the railroads would be the only carrier subject to this requirement," he said.

"We believe the railroads should be given the full benefit of freedom from minimum rate restrictions on commodity rates and seriously urge that your committee amend H.R. 11583 to clearly establish greater equality of opportunity under its provisions," he said.

Non-Op Case Nears Decision in Canada

Conciliation-board hearings in the Canadian non-op wage and job-security dispute have been completed in Montreal. The board's report is due by Aug. 31.

Union demands for a 22-cents-an-hour wage hike would fatten payrolls by an estimated $45,800,000 a year. The present hourly wage averages $1.91. A companion demand would limit to 1% a year the number of senior employees who could be laid off.

The carriers have fought both demands. They argue that a wage reduction, if anything, is in order. They contend that the unions' job-security plan would amount to a "virtual job freeze."

Nationalization Threat Fading?

The "ill winds" that have been blowing against common carriers are beginning to subside, E. Grosvenor Plowman, vice president—traffic of U.S. Steel Corp., said at Stanford University July 20.

In his keynote talk at the first annual Business Logistics Forum of the Stanford Graduate School of Business, Mr. Plowman identified these "ill winds" as "the steady breeze of pressure toward nationalization" and "a rising gale which we call business logistics. . . . The application in its present form of logical thinking by shippers has very, very often, perhaps in the majority of cases, resulted in [their] deserting common carriers and using instead contract carriers and private carriers."

"I believe these ill winds are gradually turning," said Mr. Plowman. "The tide is turning definitely away from nationalization of railroads or any other form of transportation. Even in Europe, there is a growing realization that nationalized railroads and other carriers actually are neither necessary nor desirable. Europeans are beginning to look, talk and think about restoring private enterprise in a greater degree and more effectively in their transportation."

He went on to say: "It is clear to me that as business logistics turns to the logical consideration of [shipping] alternatives and as the common carriers themselves bring their adaptability into play and actually build it into the logical patterns of the users of transportation, a balance will develop, possibly even a balance that will result in the restoration of a healthy common carrier segment of our total transportation picture."

Looking to the turn of the century, Mr. Plowman predicted that commuter services probably will be nationalized by 1999 but most air, truck and rail transportation still will be in the hands of "efficient, profitable private enterprise."

He said the number of companies operating as common carriers will be reduced, the efficiency of surviving companies will be improved, and coordination between transportation modes will be greatly strengthened.

He saw automation as the key to major improvement of the surviving companies, asserting: "Transportation must take full advantage of this breakthrough by such means as 'programmed' control of trains, trucks, or ships, and full use of data processing and memory-storage office machinery."

YOU OUGHT TO KNOW

"Dixie Jets," two new freight trains operated jointly by the Louisville & Nashville and the Pennsylvania, were placed in service Aug. 1 between Birmingham, Ala., and New York via Louisville and Cincinnati. The trains provide third morning delivery between Birmingham and mid-South points and New York and the eastern seaboard.

Pleated paper filters for diesel locomotives are the subject of a patent infringement suit in a Federal district court in Illinois. Southwick W. Briggs, inventor; his licensee, Stone Filter Co.; and the filter company's parent firm, Stone Straw Corp., have entered the suit against Superior Diesel Filter Co., Transportation Filter Co., and M & J Diesel Locomotive Filter Corp. of Chicago.

Low transportation costs are the key to revitalizing the coal industry, says a government-sponsored report ("Survey of Opportunities to Stimulate Coal Utilization") now available from the Office of Technical Service, U.S. Department of Commerce. Most promising ways to cut delivery costs, says the report, are integral trains, coal pipelines and mine-mouth transmission of electricity.

ICC has extended to Sept. 22 the deadline for filing comments on its proposed changes in its signal rules, standards and instructions (RA June 25, p. 90). The extension was granted at the request of the Railway Labor Executives' Association.

Twentieth anniversary of the Transportation Corps, youngest of the Army's technical services, was observed on July 31 with garrison reviews, receptions, demonstrations and special ceremonies in this country and throughout the world, wherever TC personnel are stationed.

Postal-rate increases sufficient to make up an anticipated deficit of nearly $900 million in the postal service have been recommended by the Chamber of Commerce of the United States. The national business organization, through spokesman Berne R. Sullivan, told the Senate Post Office Committee that "the business community, which pays over 75% of all postal revenue, believes that the postal service should be self-supporting and that it should not look to the taxpayer to make up annual deficits."

Increased sales of Evans Products Co.'s DF-B one-piece adjustable bulkheads are reported by President E. S. Evans, Jr. Recent orders, said Mr. Evans, include one for 200 sets of DF-B bulkheads for American Refrigerator Transit. In addition, 200 sets are being provided to Canadian Pacific and another 50 sets to Canadian National through the Evans licensee in Canada, International Equipment Co. Mr. Evans noted that more than 100,000 freight cars fitted with Evans damage prevention equipment are now in use.

Coal-industry efforts to obtain relief from excessive residual fuel-oil imports have shifted from the executive branch of government to the legislative. Unsuccessful in obtaining administrative action to curb the continuing increase of foreign residual oil, the National Coal Policy Conference is now asking the Senate Finance Committee to provide the necessary relief through an amendment to the Administration's Trade Expansion Bill. Residual imports under the present mandatory import control program have increased by about 40% during the past three years and are now 58,000,000 barrels a year above the maximum "safe level" for imports for national security proclaimed in 1959.

ICC has approved Chicago South Shore & South Bend's request for passenger-fare increases (RA, June 25, p. 90). A 10% increase in monthly commutation fares went into effect July 28 and a 5% increase in other interstate fares became effective Aug. 1.

United Air Lines has filed with the CAB for a reduction on round-trip jet and piston coach fares for groups of 25 or more persons to become effective Aug. 25. Similar reductions on one-way fares for groups of U.S. military personnel traveling on government orders were also asked.

Eight states eligible for 90% federal aid for interstate-highway construction are causing concern to the Bureau of Public Roads because they have to date obligated less than half of the federal funds available for 1962. So, at least, says the American Automobile Association, which has tabulated the degree to which eligible states are using the federal-aid money. By AAA standards, Delaware ranks last since it has not yet obligated any 1962 funds and has obligated only 84% of the funds available in the 1961 fiscal year. Heading the AAA list is North Carolina, which has obligated 99% of currently available funds.

Accounting Bulletin No. 15, Interpretations of Accounting Classifications, prescribed for railroad companies, issued under order dated Dec. 17, 1917, and amendments thereto, will be cancelled effective Sept. 1, 1962. The subject matters in the bulletin are "adequately covered in the current issue of the Uniform Systems of Accounts for Railroad Companies, are no longer appropriate to present-day conditions or for other reasons are no longer needed," said ICC's Division 2 in issuing the cancellation order.

Sizeable percentage increases in passenger and freight business, plus significantly higher fares, didn't keep the nation's airlines from losing heavily over the first four months of 1962. The overall loss, as reported by one airline economist: $20,000,000.

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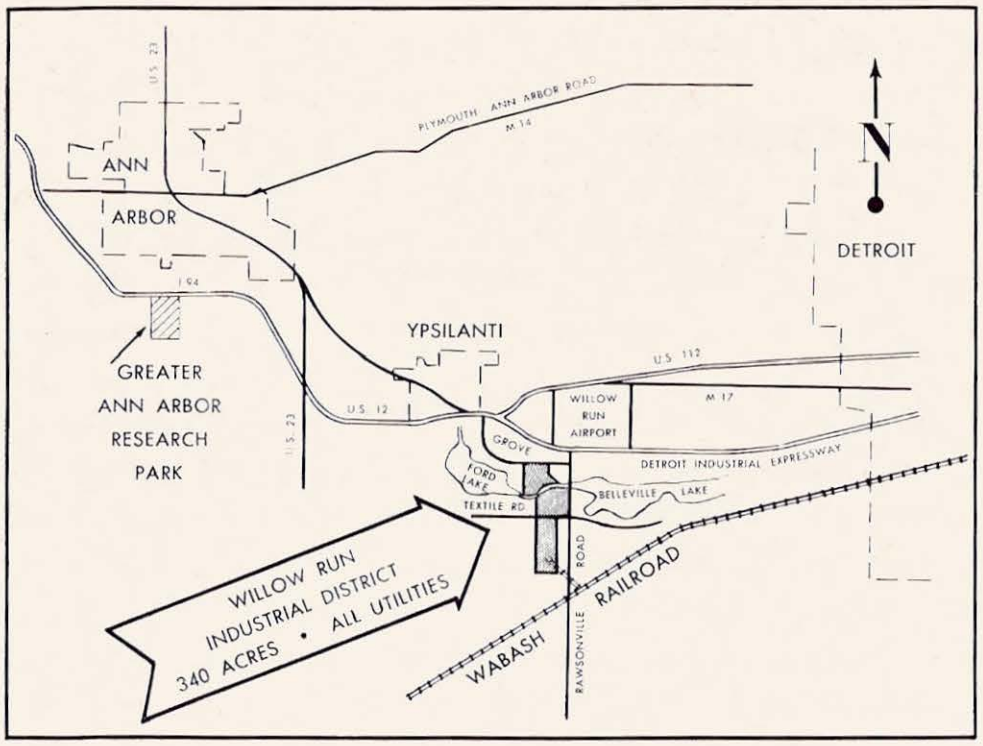

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Chesapeake and Ohio Railway 13
Chicago, Milwaukee St. Paul & Pacific 47
Denver & Rio Grande Western RR 43
Elgin, Joliet & Eastern 62
General Railway Signal Company ..... BC
General Steel Industries, Inc. 11
Hydra-Cushion, Inc. 21
International Car Div. 55
Lenkurt Electric Company 16
Norfolk & Western Railway 45
Northern Pacific Railway Company 60
Rock Island Lines 20
Seaboard Air Line Railroad 36
Shell Oil Company ..... IBC
Southern Pacific 12
Stanray Corporation 49
Timken Roller Bearing Company, The 14, 15
Union Pacific Railroad 33
Union Switch & Signal (Div. of Westinghouse Air Brake Company) 4
Wabash Railroad Company 65
Whiting Corporation 56
Wine Railway Appliances Co., The ..... IFC
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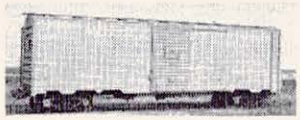

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Tops in Area Promotion

A few years ago, for a period of weeks, the men composing the higher echelons of the traffic department of a medium-sized railroad were mysteriously absent from their usual occupation. Then the secret came out—a large plant was going up alongside this railroad's line, and the officers of the railroad (under the guidance of its industrial development department) had been out quietly, as individuals, acquiring the large acreage needed for the plant.

The railroad people had studied all the advantages—and weighed the possible disadvantages—of the proposed site, and had made known the results of their investigation to the manufacturer. He decided that the location was the one best suited to his requirements—if he could acquire the land at a reasonable price. And the railroad people helped solve that problem, too.

There is not now, and there never has been, any one factor more effective in achieving the economically strategic location of industrial production in this country, than the railroads. Most industrialists know this, but many otherwise well informed citizens do not—and it is high time that they did. Railroads can perform this highly valuable service to their communities only to the degree that they have the means to provide the skilled staff work that is required.

Railroads were the pioneers in the activity known as "industrial development," just as they were in the parallel "agricultural development." They are still leaders in it, even though they are not always direct beneficiaries of the effort, to the same degree that they were a couple of generations ago.

It used to be that, when the production of a community increased, the traffic of the railroads serving that community increased in the same ratio. This is no longer necessarily so. It depends upon the nature of the industries concerned. While some of them engender as large a ratio of railroad tonnage as they ever did, some of them nowadays may be using other forms of transportation even more than they do the railroads. However, this makes no great difference in railroad industrial development programs. Their interest lies in community growth and prosperity; and, if railroads can contribute to that goal, they will do it, without stopping to consider that they may be building up more tonnage for their rivals than for themselves.

There is no other one factor more important to the profitability and growth of an industrial enterprise than its strategic location—as to raw materials, markets, labor supply and transportation service and costs. The railroads serve as fact finders for industrialists, in helping them find the places where the locational elements are in "optimum" balance. When the prospective location is decided upon, they then proceed to help the management acquire the specific site he wants.

As a part of the locating process they also study transportation costs and service, to gear them as nearly as they can to the needs of the interested industry. In thus assisting producers, the railroads incidentally afford a parallel and equally important service for the communities on their lines—making their attractions known to industrialists who are expanding their operations, or are involved in problems of necessary relocation.

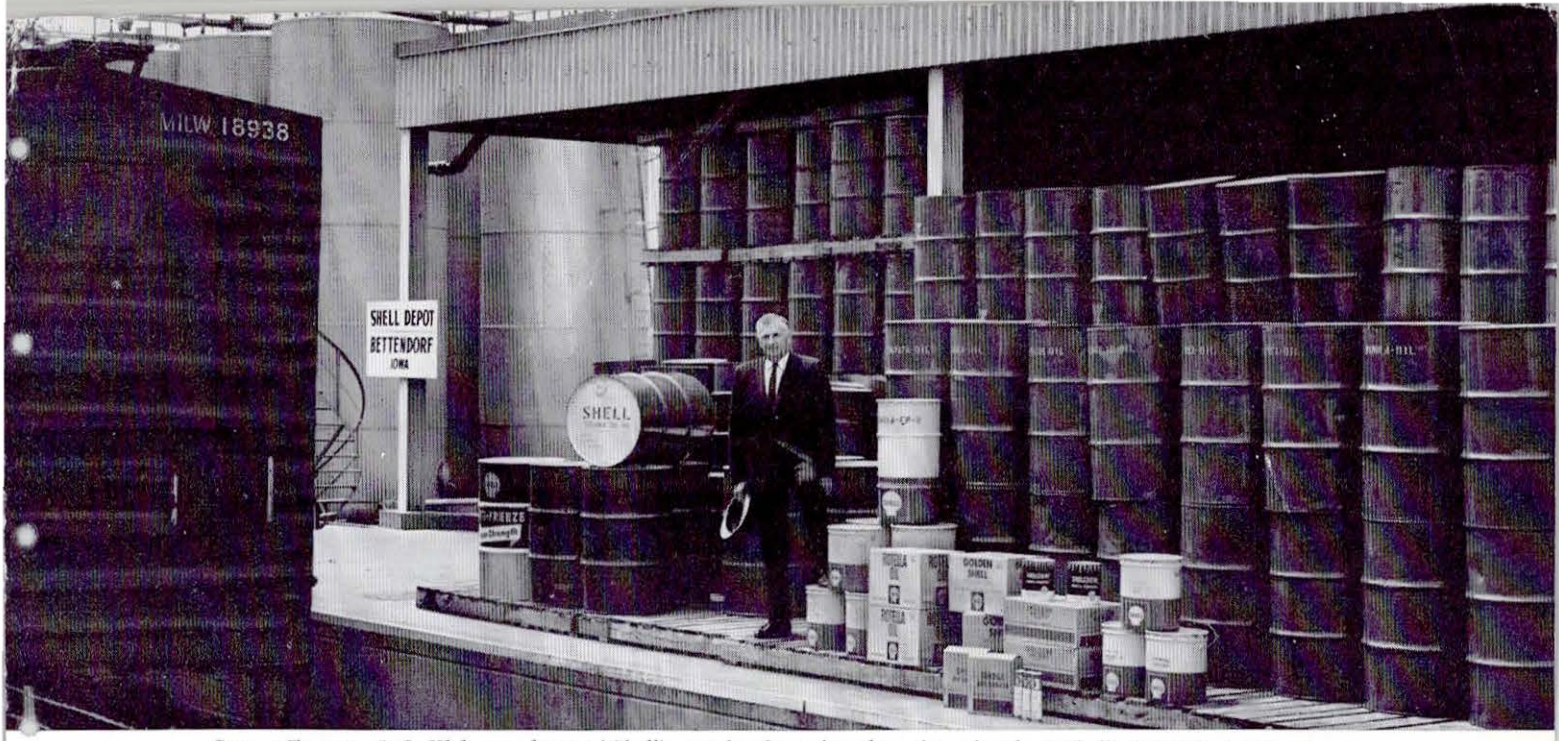
We happen to have some figures of our own which reveal just what people and institutions are most active in studying and making known to industries the attractions—from an economic standpoint—of specific locations for new facilities. This index comes from the number of different categories of advertisers in an annual publication of ours, entitled "Plant Location." In the 1962 edition of this reference work, the most numerous class of advertisers was the utility companies. The railroads came next. The states themselves came third, followed by cities, counties, and areas—in that order.

Bigger Things Still to Come

It isn't strange that utilities should head the list because, after all, their business increases automatically as their communities grow. And they have no competition within their own areas—that is, the only competition they encounter is from other geographical areas. Hence there is little they *can* advertise except their communities. The railroads would appear to stand alone among the leaders in community development whose promotional efforts bring as many benefits to their competitors as to themselves. By contrast, we have yet to hear of similar community promotional programs carried on by any other transportation agencies.

Great as have been the railroads' accomplishments in this sector, there are signs of a "breakthrough" to even wider and more intensive efforts. Just to name one of them—consider the program of one big railroad to establish economic rate bases (where volume justifies) to any point in its territory, equal to those available at water-competitive points. A policy like this could change the industrial geography of an entire region. And why not, when the relative area-wide economy of railroad service is thus expanded? Not to overlook, either, the 8½-lb. "Region of Opportunity" reference book recently published by the P. & L. E.

Remarkable as railroad industrial development efforts have been, there's a good chance that imaginative railroaders are going to demonstrate (in this zone as in so many others) that "we ain't seen nothing yet."



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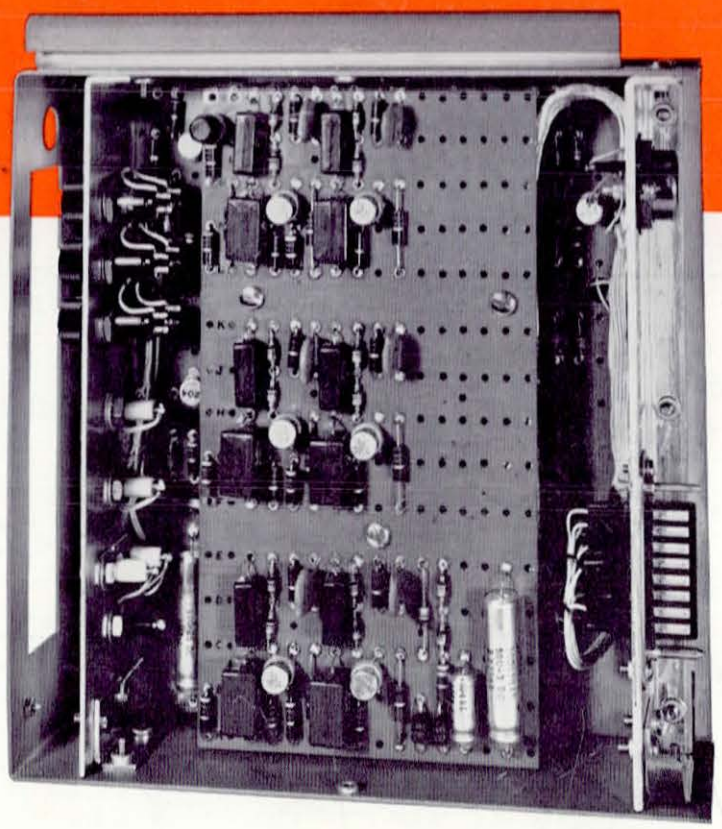

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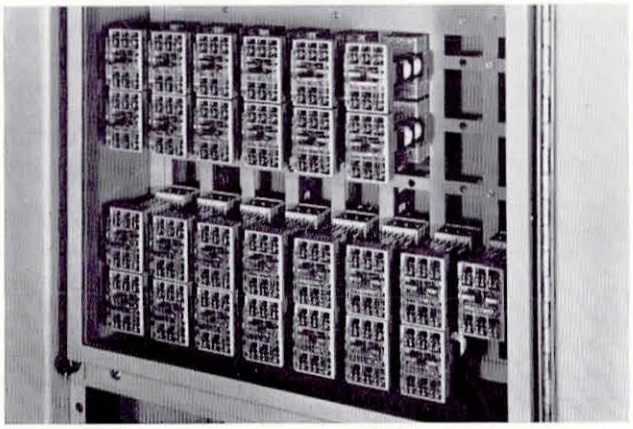

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